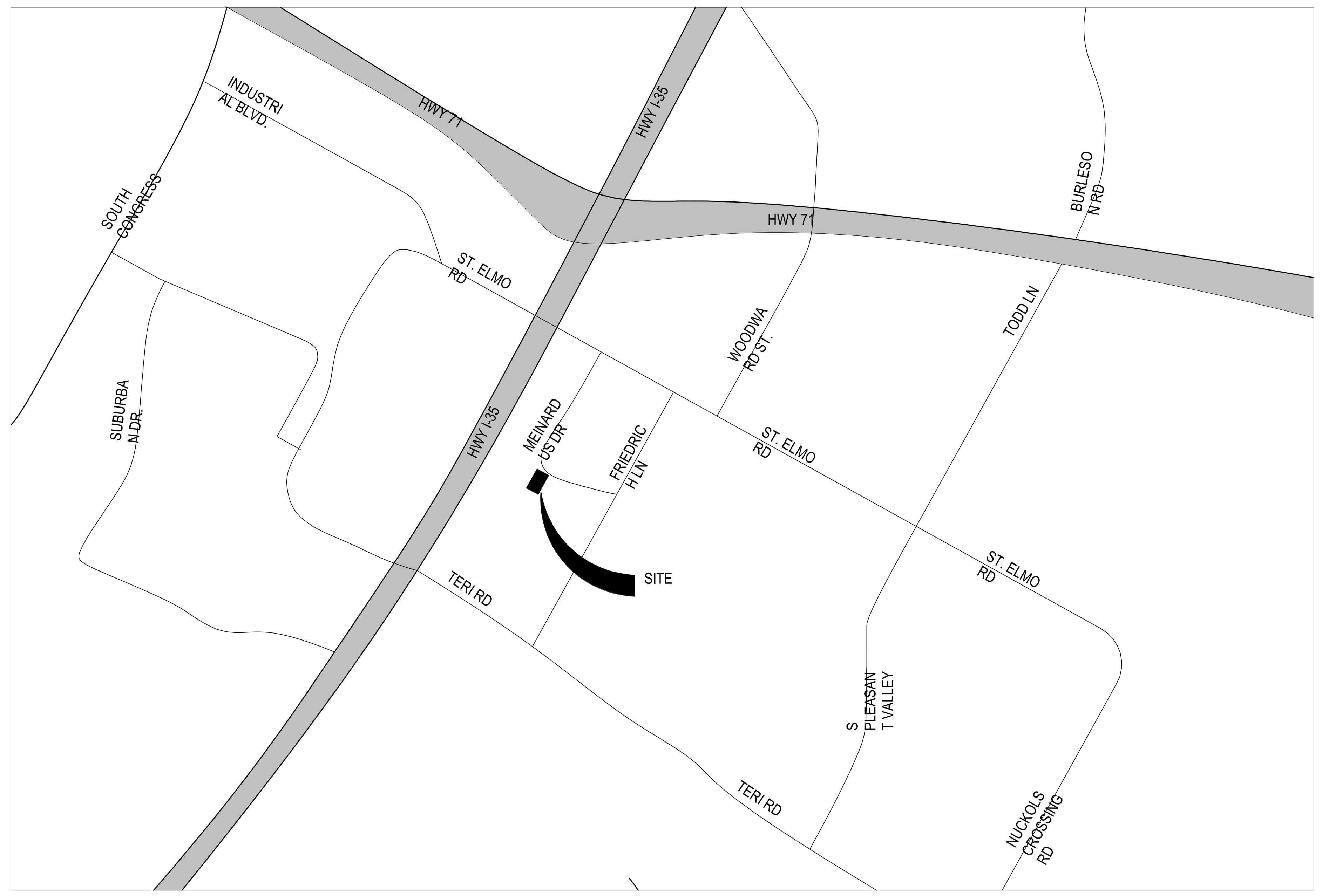
ST. ELMO SERVICE CENTER 8 RENOVATIONS

COA CIP# 6011.034

Sponsor Dept: Fleet Mobility Services
Managing Dept: Public Works
Project Manager: Andrew Clements, APMD

4411 Meinardus Dr , Austin, TX 78744

GSC ARCHITECTS PROJ. NO.: 202001400



04/08/2021

PLAN NORTH
TRUE NORTH

REGISTERED ARCHITECT BONITA TICE GRAY 13015 STATE OF TEXAS

STATE OF TEXAS ALFRED J. HAJKA 129815 LICENSED PROFESSIONAL ENGINEER

STATE OF TEXAS AARON DENNINGTON 111364 LICENSED PROFESSIONAL ENGINEER

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MARTINEZ MOORE ENGINEERS

CITY OF AUSTIN FOUNDED 1839

AYS Engineering, LLC MEP CONSULTING ENGINEERING

TSEN·ENGINEERING

HALFORD BUSBY CONSTRUCTION CONSULTANTS

ABBREVIATIONS

"	INCH
#	POUND
&	AND
'	FOOT
@	AT (THE RATE OF)
A/C	AIR CONDITIONING
A/E	ARCHITECT-ENGINEER
AB	ANCHOR BOLT
ABV	ABOVE
ACST	ACOUSTIC(AL)
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADMIN	ADMINISTRATION
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURAL
ASPH	ASPHALT
ASSY	ASSEMBLY
AUTO	AUTOMATIC
BATH	BATHROOM
BD	BOARD
BDRM	BEDROOM
BEV	BEVEL(ED)
BITUM	BITUMINOUS
BL	BUILDING LINE
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM, BENCHMARK
BO	BY OTHERS
BOD	BOTTOM OF DECK
BOT	BOTTOM
BR	BACKER ROD
BRKT	BRACKET
BSMT	BASEMENT
BTWN	BETWEEN
C	COURSE(S)
C TO C	CENTER TO CENTER
CAB	CABINET
CEM	CEMENT
CER	CERAMIC
CFLG	COUNTER FLASHING
CG	CORNER GUARD
CH	COAT HOOK
CH BD	CHALKBOARD
CHAN	CHANNEL
CI	CAST IRON
CIR	CIRCLE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR(ANCE)
CMP	COMPOSITE METAL PANEL
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CASED OPENING, CLEANOUT
COL	COLUMN
COMPT	COMPARTMENT
CONC	CONCRETE
COND	CONDITION
CONN	CONNECT(ION)
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR, CORRUGATED
CPRS	COMPRESSIBLE
CPT	CARPET
CR	CHAIR RAIL
CRS	COLD ROLLED STEEL
CSK	COUNTER SINK, COUNTER SUNK
CT	CERAMIC TILE
CTR	CENTER
CW	CURTAIN WALL
D	DEEP
DB	DOCK BUMPER
DBL	DOUBLE
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWR	DRAWER
E	EAST
EA	EACH
EB	EXPANSION BOLT
EF	EXHAUST FAN
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTIC, ELASTOMERIC
ELEC	ELECTRIC
ELEV	ELEVATOR
ENCL	ENCLOSE, ENCLOSURE
ENGR	ENGINEER
ENT	ENTRANCE
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQUIP	EQUIPMENT

ABBREVIATIONS

EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPOSED
EXT	EXTERIOR
F/F	FACE TO FACE
FA	FIRE ALARM
FAB	FABRICATE(D), FABRICATION
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER, FINISHED END
FEC	FIRE EXTINGUISHER CABINET
FF&E	FURNITURE, FIXTURES AND EQUIPMENT
FFE	FINISH FLOOR ELEVATION
FGL	FIBERGLASS
FIN	FINISH(ED)
FIXT	FIXTURE
FLEX	FLEXIBLE
FLG	FLOORING
FLR	FLOOR
FLUOR	FLUORESCENT
FOS	FACE OF STUD
FP	FIREPROOF(ING)
FR	FIRE RATED
FRMG	FRAMING
FRT	FIRE RETARDANT TREATED
FT	FOOT, FEET
FTG	FOOTING
FURG	FURRING
FURN	FURNISH(ING), FURNITURE
FWC	FABRIC WALL COVERING
GA	GAUGE, GAGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GI	GALVANIZED IRON
GL	GLASS, GLAZED, GLAZING
GR	GUARD RAIL
GYP BD	GYPSUM BOARD
H	HIGH
HB	HOSE BIB
HC	HOLLOW CORE
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HANDRAIL
HT	HEIGHT
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HVY	HEAVY
HW	HOT WATER
ID	INSIDE DIAMETER
INCAND	INCANDESCENT
IND	INDUSTRIAL
INFO	INFORMATION
INST	INSTALL(ED)
INSUL	INSULATE, INSULATION
INT	INTERIOR, INTERNAL
ISOL	ISOLATE, ISOLATION
JAN	JANITOR
J-BOX	JUNCTION BOX
JT	JOINT
KD	KNOCK DOWN
KIT	KITCHEN
KO	KNOCKOUT
KOP	KNOCK OUT PANEL
L	LEFT
LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LBR	LUMBER
LD	LINEAR DIFFUSER
LDG	LANDING
LH	LEFT HAND
LIN	LINEAR
LKR	LOCKER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LP	LOW POINT
LT	LIGHT
LT WT	LIGHT WEIGHT
LTG	LIGHTING
LVR	LOUVER
LVT	LUXURY VINYL TILE
MACH	MACHINE
MAN	MANUAL
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MDF	MEDIUM DENSITY FIBER BOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFD	MANUFACTURED
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR

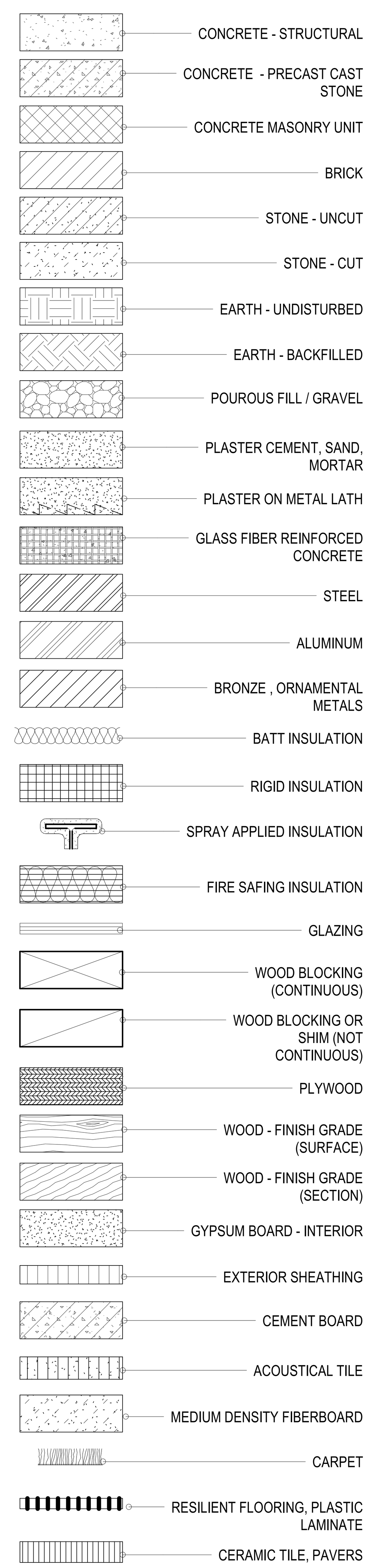
ABBREVIATIONS

MISC	MISCELLANEOUS
MO	MASONRY OPENING
MOD	MODIFY(IED), MODIFICATION, MODULE
MRT	MOISTURE RESISTANCE TREATED
MTD	MOUNTED
MTL	METAL
MULL	MULLION
MULT	MULTIPLE
N	NORTH
N/A	NOT APPLICABLE
NAT	NATURAL
NC	NON-CORROSIVE
NEO	NEOPRENE
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFIENT
NS	NON-SLIP
NTS	NOT TO SCALE
O/A	OVERALL
O/H	OVERHEAD
O/O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED / OWNER INSTALLED
OFF	OFFICE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OSB	ORIENTED STRAND BOARD
PAR	PARALLEL
PARA	PARAGRAPH
PB	PARTICLE BOARD
PC	PRECAST
PED	PEDESTAL, PEDESTRIAN
PERF	PERFORATE(D)
PERP	PERPENDICULAR
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTIC, PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POLYISO	POLYISOCYANURATE
PORT	PORTABLE
PR	PAIR
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PREP	PREPARATION
PROD	PRODUCTION
PROJ	PROJECT(OR), PROJECTION
PS	PROJECTION SCREEN, POLYSTYRENE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT, PAINT
PTD	PAINTED, PAPER TOWEL DISPENSER
PTDR	PAPER TOWEL DISPENSER WITH WASTE RECEPTACLE
PTN	PARTITION
PTS	PNEUMATIC TUBE STATION
PVC	POLYVINYL CHLORIDE
PWR	POWER
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAD	QUADRANT
R	RISER(S), RADIUS
RA	RETURN AIR
RB	RUBBER BASE
RCV	RECEIVER
RD	ROOF DRAIN
REC	RECESSED
RECPT	RECEPTACLE
REF	REFERENCE, REFRIGERATOR
REG	REGISTER, REGULATOR
REINF	REINFORCE, REINFORCING
REPRO	REPRODUCE, REPRODUCTION
REQD	REQUIRED
RESIL	RESILIENT
RESIST	RESISTANT
RET	RETURN
REV	REVISE, REVISION
RFG	ROOFING
RH	ROOF HATCH, RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
RT	RIGHT
RTU	ROOF TOP UNIT
RW	RETAINING WALL
S	SOUTH
SAFB	SOUND ATTENUATING FIRE BATTS
SC	SOLID CORE
SCHED	SCHEDULE(D)
SCRN	SCREEN
SD	STORM DRAIN, SOAP DISPENSER
SECT	SECTION, SECTOR
SEP	SEPARATE, SEPARATION
SF	SQUARE FOOT (FEET), STOREFRONT
SGL	SINGLE
SH	SINGLE HUNG
SHT	SHEET
SHTHG	SHEATHING
SHV	SHELVING

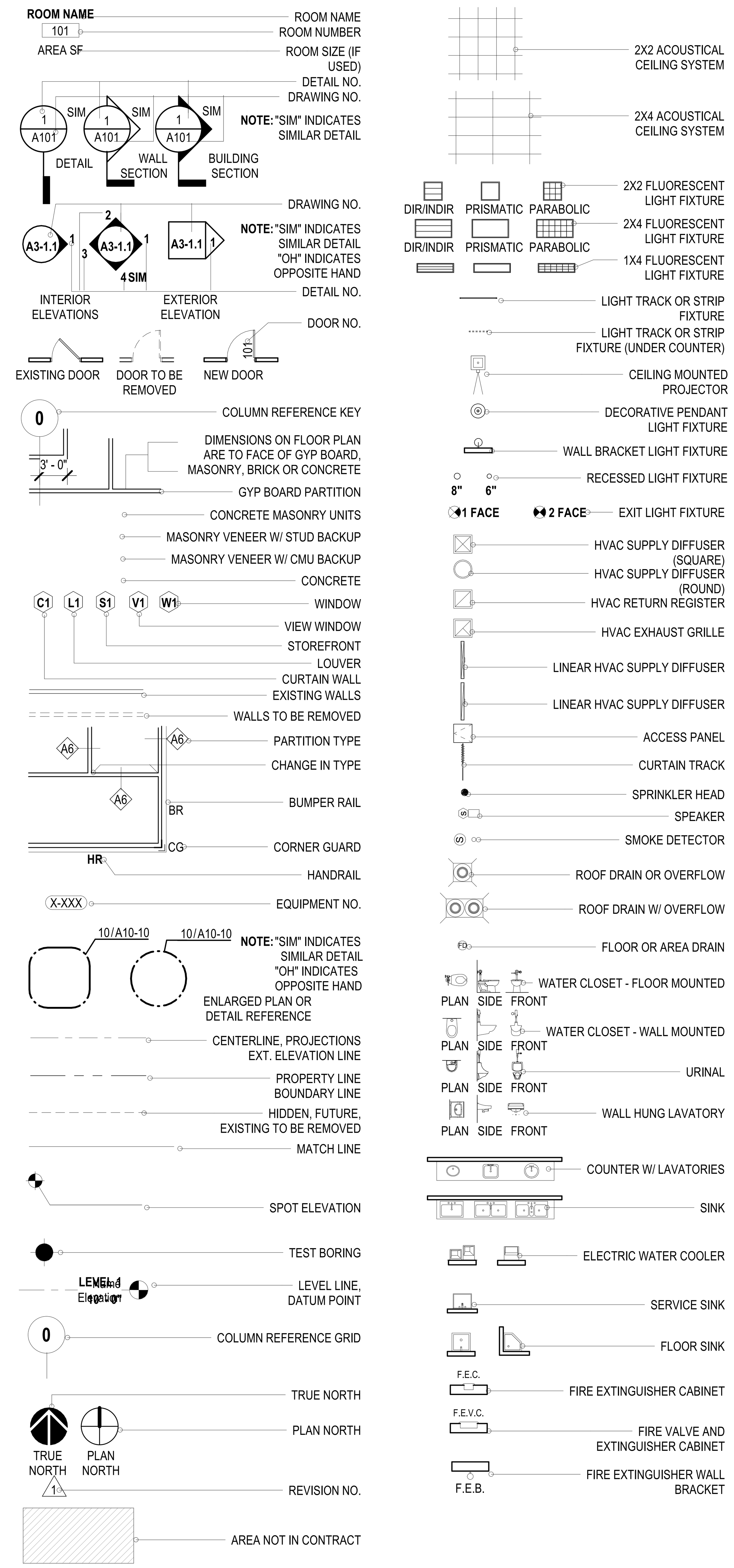
ABBREVIATIONS

SHWR	SHOWER
SIM	SIMILAR
SLNT	SEALANT
SP	SPANDREL
SPECS	SPECIFICATIONS
SPLY	SINGLE PLY
SQ	SQUARE
SR	SHOWER ROD
SS	SANITARY SEWER
SSTL	STAINLESS STEEL
STA	STATION
STAG	STAGGERED
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE, STRUCTURAL
SUP	SUPPLY, SUPPORT
SURF	SURFACE
SUSP	SUSPEND(ED)
SV	SHEET VINYL
SVC	SERVICE
SYS	SYSTEM
T	TREAD(S)
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TB	TOWEL BAR, TACK BOARD, THROUGH BOLT
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPERED, TEMPORARY, TEMPERATURE
TER	TERRAZZO
THK	THICK
TLT	TOILET
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CURB
TOS	TOP OF STEEL
TOSC	TOP OF STRUCTURAL CONCRETE
TOW	TOP OF WALL
TRMT	TREATMENT
TRTD	TREATED
TS	TUBULAR STEEL
TV	TELEVISION
TYP	TYPICAL
UC	UNDER COUNTER
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UTIL	UTILITY
VAR	VARIES, VARIABLE, VARIOUS
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VOL	VOLUME
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WEST, WIDE, WIDTH
W/	WITH
W/O	WITH OUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WGL	WIRED GLASS
WH	WATER HEATER, WEEP HOLE
WI	WROUGHT IRON
WP	WATER PROOFING
WR	WATER RESISTANT, WASTE RECEPTACLE
WS	WEATHERSTRIPPING
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

MATERIALS LEGEND



SYMBOLS LEGEND



INDEX OF DRAWINGS

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A00-01	PROJECT INFORMATION
TAS-1	ACCESSIBILITY INFORMATION
TAS-2	ACCESSIBILITY INFORMATION
FLS-1	FIRE & LIFE SAFETY PLAN - LEVEL 1
01 CIVIL	
GN1	GENERAL NOTES
-	SURVEY
C100	DEMOLITION - WEST
C101	DEMOLITION - EAST
C200	LAYOUT - WEST
C201	LAYOUT - EAST
C300	GRADING PLAN - WEST
C301	GRADING PLAN - EAST
C400	EROSION CONTROL PLAN - WEST
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C500	DETAILS
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EU01-01	SITE PLAN - ELECTRICAL
EU01-02	SITE PLAN - PHOTOMETRICS

BUILDING CODE INFORMATION

APPLICABLE CODES:

EXISTING BUILDING CONSTRUCTED UNDER THE FOLLOWING CODES:
2003 IBC WITH CITY OF AUSTIN. AMENDMENTS
2003 IFC WITH CITY OF AUSTIN. AMENDMENTS
2003 UME (IAPMO) WITH CITY OF AUSTIN. AMENDMENTS
2003 UPC (IAPMO) WITH CITY OF AUSTIN. AMENDMENTS
2000 NEC WITH CITY OF AUSTIN. AMENDMENTS
2003 IECC WITH CITY OF AUSTIN. AMENDMENTS
1994 TEXAS ACCESSIBILITY STANDARDS

RENOVATION DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES:

2015 IBC WITH CITY OF AUSTIN. AMENDMENTS
2015 IFC WITH CITY OF AUSTIN. AMENDMENTS
2015 UMC WITH CITY OF AUSTIN. AMENDMENTS
2015 UPC WITH CITY OF AUSTIN. AMENDMENTS
2017 NEC WITH CITY OF AUSTIN. AMENDMENTS
2015 IEBC WITH CITY OF AUSTIN. AMENDMENTS
2012 TEXAS ACCESSIBILITY STANDARDS

CONSTRUCTION TYPE: Moderate-hazard factory industrial group, F-1.

WORK AREAS LOCATED ON LEVEL 1

GENERAL NOTES TO PROJECT

1 THESE NOTES APPLY TO EACH ARCHITECTURAL SHEET
2 THE CONTRACT DOCUMENTS INCLUDE THE COMPLETE PLAN SET, PROJECT MANUAL AND ALL SUBSEQUENT OFFICIALLY ISSUED MODIFICATIONS. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK OF ALL TRADES AND ISSUE COMPLETE DOCUMENTS NECESSARY FOR SCOPE EXECUTION.
3 DO NOT SCALE DRAWINGS. SHOULD DIMENSIONS BE MISSING OR CONFLICTING, NOTIFY ARCHITECT PRIOR TO PROCEEDING WITH RELATED WORK.
4 GENERAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL OWNER-PROVIDED OR CONTRACTED ITEMS.
5 CONTRACTOR SHALL EXERCISE EXTREME CARE SO AS TO NOT DAMAGE EXISTING STRUCTURES, PAVING, LANDSCAPE AREAS, FACILITIES OR TREES TO BE SAVED. ANY DAMAGED ITEMS SHALL BE REPAIRED / REPLACED TO ORIGINAL CONDITION.
6 DETAILS INDICATED AS "TYPICAL" ARE APPLICABLE UNLESS NOTED OTHERWISE.
7 NO UTILITIES (CONDUIT, PLUMBING, ETC.) SHALL BE EXPOSED TO VIEW WITHOUT WRITTEN APPROVAL OF THE ARCHITECT, U.N.O.
8 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING NEEDED DURING CONSTRUCTION.

GENERAL NOTES TO PROJECT

9 THE GENERAL CONTRACTOR SHALL MAINTAIN A SITE "NEAT" IN APPEARANCE. THE PROJECT SHALL MINIMIZE THE CREATION OF CONSTRUCTION WASTE ON THE JOB SITE. OF THE INEVITABLE WASTE THAT IS GENERATED, (I.E. PACKAGING, BREAKAGE, ETC.) AS MANY OF THE NON-HAZARDOUS WASTE MATERIALS AS ECONOMICALLY FEASIBLE SHALL BE REUSED, SALVAGED, OR RECYCLED. WASTE DISPOSAL IN LANDFILLS SHALL BE MINIMIZED. CONSTRUCTION DEBRIS THAT IS REMOVED FROM THE SITE WILL BE LEGALLY DISPOSED OF AT LEAST WEEKLY BY THE CONTRACTOR.
10 PROVIDE AND COORDINATE BLOCKOUTS, SLEEVES, INSERTS, BOLTS, PLATES, ETC. PRIOR TO PLACING CONCRETE OR MASONRY.
11 VERIFY LOCATIONS OF UTILITIES PRIOR TO EXCAVATION, TRENCHING, ETC. CONTRACTOR SHALL REPAIR OR REPLACE ALL UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS.
12 EACH CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AT THE SITE AND BE RESPONSIBLE FOR REMOVING OR REPLACING EXISTING IMPROVEMENTS AS REQUIRED TO PERFORM THE WORK.
13 SECURITY AND SAFETY ARE THE CONTRACTORS RESPONSIBILITY. SITE SHALL BE COMPLETELY FENCED AND SECURED DURING CONSTRUCTION.
14 NO ASBESTOS CONTAINING MATERIALS, IN ANY FORM SHALL BE USED OR INCORPORATED INTO THE PROJECT.
15 SEPARATE DISSIMILAR METALS FROM CONTACT WITH EACH OTHER.

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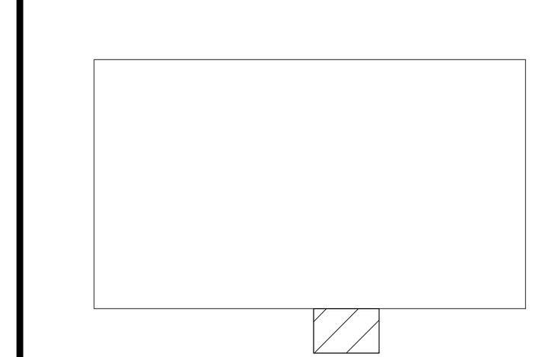
ST. ELMO SERVICE CENTER 8 RENOVATIONS



KEY PLAN

NO.	REVISION	DATE

04/08/2021
BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:
PROJECT INFORMATION

DATE: 04/08/2021
REVIEWED BY: GSC
PROJECT NO.: 202001400
SHEET NO.:
A00-01

GSC - 202001400 ST. ELMO SERVICE CENTER 8 RENOVATIONS

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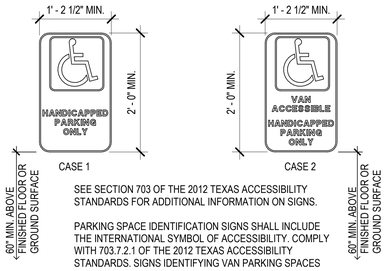
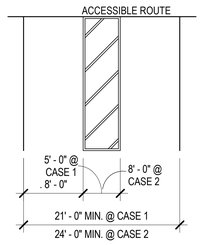


SEE SECTION 703 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON SIGNS.

PARKING SPACE IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. COMPLY WITH 703.7.2.1 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS. SIGNS IDENTIFYING VAN PARKING SPACES SHALL CONTAIN THE DESIGNATION "VAN ACCESSIBLE."

CENTER SIGN IN FRONT OF EACH PARKING SPACE.

PARKING IDENTIFICATION SIGNS



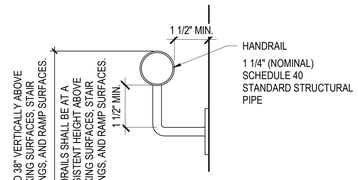
CASE 1: PARKING SPACES WITH SHARED AISLE
CASE 2: VAN ACCESSIBLE PARKING

NOTE: SURFACE SLOPE AT ACCESSIBLE PARKING IS LIMITED TO 2% MAXIMUM IN ANY DIRECTION

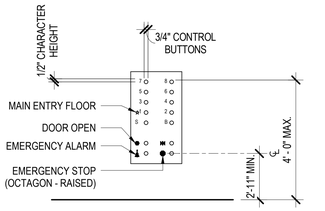
502: PARKING SPACES

INFORMATION PROVIDED IS NOT COMPREHENSIVE. REFER TO CHAPTER 5 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON PARKING SPACES, PASSENGER LOADING ZONES, STAIRWAYS AND HANDRAILS

CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS

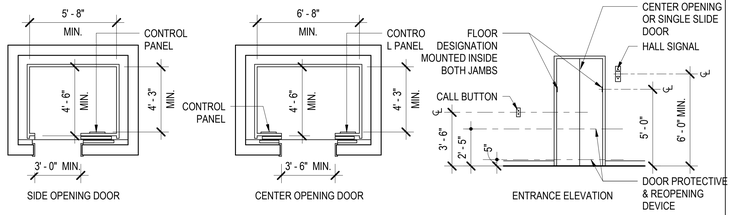


505: HANDRAILS



NOTE: ALL CONTROL BUTTONS SHALL BE DESIGNATED BY BOTH BRAILLE AND RAISED CHARACTERS

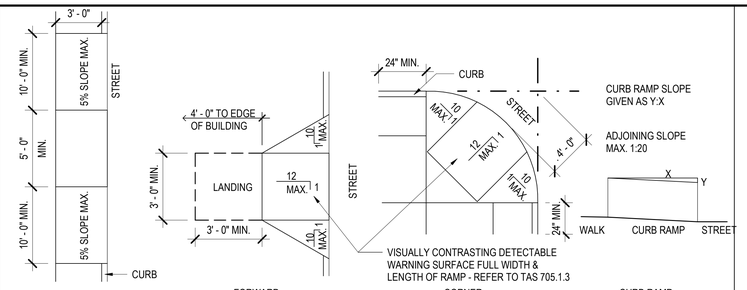
CONTROL PANEL



INFORMATION PROVIDED IS NOT COMPREHENSIVE. REFER TO CHAPTER 4 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON ACCESSIBLE ROUTES, WALKING SURFACES, DOORS, DOORWAYS, AND GATES, RAMPS, CURB RAMPS, OTHER TYPES OF ELEVATORS AND PLATFORM LIFTS.

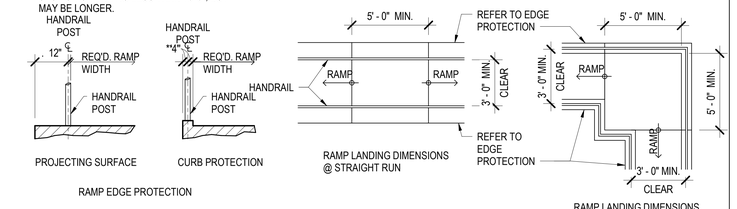
407: ELEVATORS

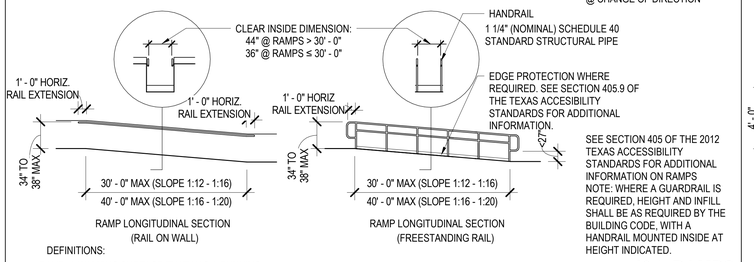
CHAPTER 4: CONTINUED



406: CURB RAMPS

NOTE: 5% SLOPE CONTROLS ACTUAL LENGTH OF SLOPING PORTION OF SIDEWALK, AND ACTUAL LENGTH OF THIS SECTION CAN BE NO LESS THAN 10'-0", BUT MAY BE LONGER.





SEE SECTION 405 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON RAMPS

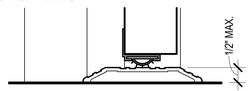
NOTE: WHERE A GUARDRAIL IS REQUIRED, HEIGHT AND INFILL SHALL BE AS REQUIRED BY THE BUILDING CODE, WITH A HANDRAIL MOUNTED INSIDE AT HEIGHT INDICATED.

DEFINITIONS:

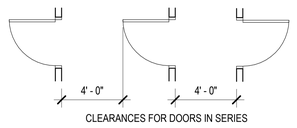
RAMP: A WALKING SURFACE THAT HAS A RUNNING SLOPE STEEPER THAN 1:20.

HANDRAILS: REQUIRED ON BOTH SIDES FOR RAMPS OF RISE > 6" OR A HORIZONTAL LENGTH > 72".

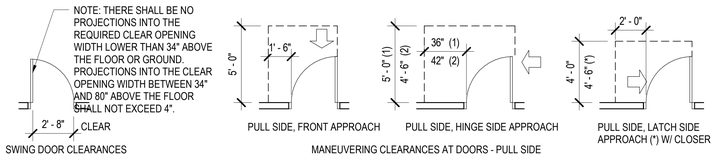
405: RAMPS



DOOR THRESHOLD DETAIL



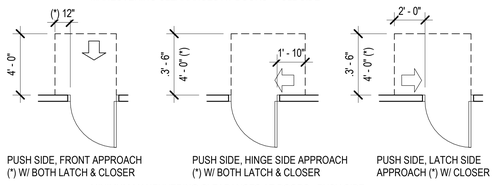
CLEARANCES FOR DOORS IN SERIES



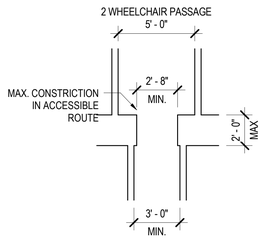
NOTE: ALL DOORS IN ALCOVES MUST COMPLY WITH THE CLEARANCES NOTED FOR FRONT APPROACHES.

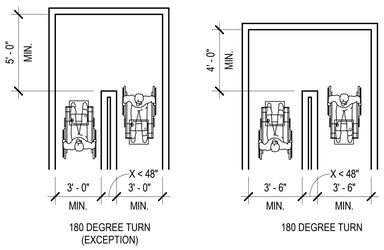
SEE SECTION 404.2.4.3 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON DOORS IN RECESSES.

SEE SECTION 404 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON DOORS



404: DOORS, DOORWAYS, AND GATES

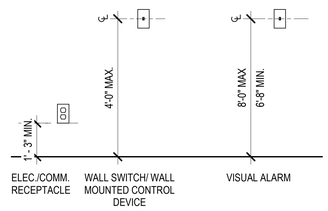




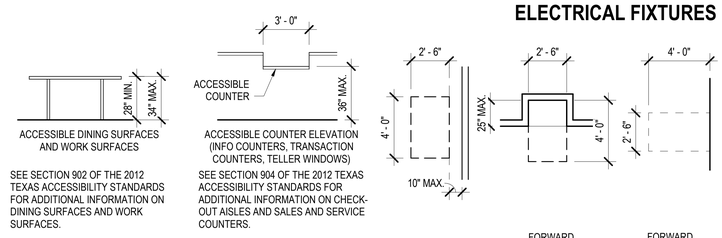
INFORMATION PROVIDED IS NOT COMPREHENSIVE. REFER TO CHAPTER 4 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON ACCESSIBLE ROUTES, WALKING SURFACES, DOORS, DOORWAYS, AND GATES, RAMPS, CURB RAMPS, ELEVATORS AND PLATFORM LIFTS.

403: WALKING SURFACES

CHAPTER 4: ACCESSIBLE ROUTES

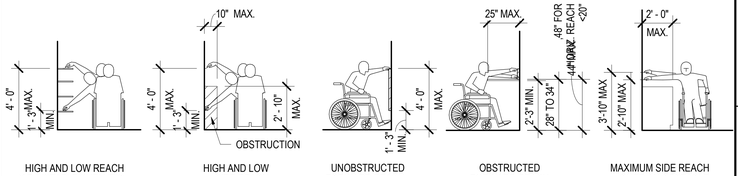


ELECTRICAL FIXTURES

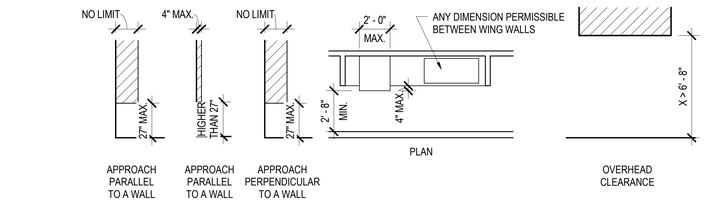


SEE SECTION 902 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON DINING SURFACES AND WORK SURFACES.

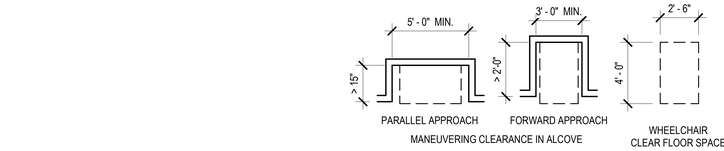
SEE SECTION 904 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON CHECK-OUT AISLES AND SALES AND SERVICE COUNTERS.



308: REACH RANGES

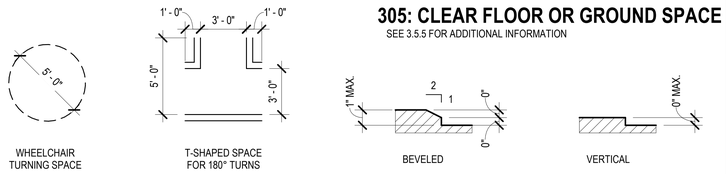


307: PROTRUDING OBJECTS



305: CLEAR FLOOR OR GROUND SPACE

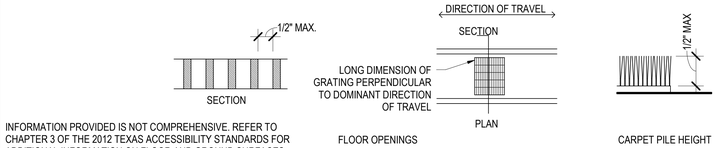
SEE 3.5.5 FOR ADDITIONAL INFORMATION



304: TURNING SPACE

303: CHANGES IN LEVEL

SEE 303.4 FOR LEVEL CHANGES > 1/2"



INFORMATION PROVIDED IS NOT COMPREHENSIVE. REFER TO CHAPTER 3 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON FLOOR AND GROUND SURFACES, CHANGES IN LEVEL, TURNING SPACE, CLEAR FLOOR OR GROUND SPACE, KNEE AND TOE CLEARANCE, PROTRUDING OBJECTS, REACH RANGES AND OPERABLE PARTS.

302: FLOOR AND GROUND SURFACES

CHAPTER 3: BUILDING BLOCKS

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN FOUNDED 1839

ST. ELMO SERVICE CENTER 8 RENOVATIONS

KEY PLAN

NO.	REVISION	DATE

04/08/2021

BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:

ACCESSIBILITY INFORMATION

DATE: 04/08/2021

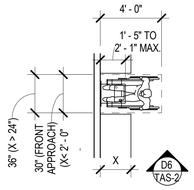
REVIEWED BY: GSC

PROJECT NO.: 202001400

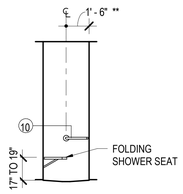
SHEET NO.:

TAS-1

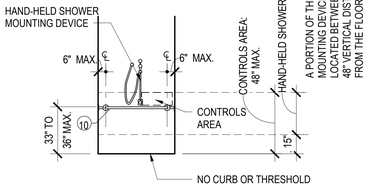
NOTE: IF THE BOTTOM OF LEADING EDGE OF THE DRINK FOUNTAIN IS MOUNTED MORE THAN 27" A.F.F., THE LEADING EDGE OF THE DRINKING FOUNTAIN CAN PROTRUDE A MAXIMUM OF 4" INTO WALKS, CORRIDORS, PASSAGEWAYS, HALLS OR AISLES
SEE SECTION 211 AND 602 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON DRINKING FOUNTAINS.



E6 DRINKING FOUNTAIN
1/4" = 1'-0"

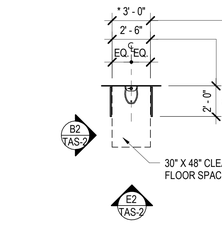


E5 TRANSFER SHOWER BACK WALL
1/4" = 1'-0"



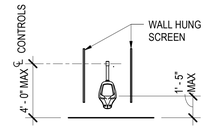
NOTE: ALWAYS LOCATE SHOWER CONTROLS AND SHOWER HEAD ON SAME WALL

E4 ROLL-IN SHOWER WITHOUT SEAT
1/4" = 1'-0"



* FLOOR SPACE 36" WIDE IF PARTITION DEEPER THAN 24"

E3 ACCESSIBLE URINAL
1/4" = 1'-0"



E2 ACCESSIBLE URINAL FRONT
1/4" = 1'-0"

GENERAL NOTES - T.A.S.

1 THESE STANDARDS ARE TAKEN FROM FEDERAL AND STATE LAW, AND THEY TAKE PRECEDENT OVER THE REMAINDER OF THE DOCUMENTS. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL DRAWINGS AND THE INFORMATION GIVEN ON THIS SHEET.
2 INFORMATION SHOWN ON THIS SHEET IS THE MINIMUM REQUIRED FOR ADA COMPLIANCE.
3 NOT ALL CONDITIONS SHOWN ON THIS SHEET MAY BE REQUIRED BY THIS PROJECT. COMPARE THE REQUIREMENTS OF THE ARCHITECTURAL DRAWINGS WITH THIS SHEET FOR RELEVANCE OF INFORMATION.
4 UNLESS NOTED OTHERWISE, DIMENSIONS INDICATED ARE THE MINIMUM CLEAR DIMENSIONS REQUIRED BY THE ADA ACCESSIBILITY GUIDELINES. DIMENSIONS ACCOMPANIED WITH **INDICATES ABSOLUTE DIMENSIONS. THE CONTRACTOR IS RESPONSIBLE FOR LAYOUT OF BUILDING ELEMENTS TO ASSURE THAT DIMENSIONS SHOWN ARE PROVIDED.
5 NOTIFY THE ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN THE ARCHITECTURAL DRAWINGS AND THE INFORMATION GIVEN ON THIS SHEET.
6 DO NOT SCALE THESE DRAWINGS.
7 REFER TO FEDERAL PUBLICATION "AMERICANS WITH DISABILITIES ACT, TITLE III : PUBLIC ACCOMMODATIONS" (LATEST EDITION) AND PROJECT LOCAL GOVERNING REGULATIONS FOR COMPLETE PROJECT ACCESSIBILITY REQUIREMENTS
8 WEBSITES:
9 HTTP://WWW.ADA.GOV
10 HTTP://WWW.LICENSE.STATE.TX.US/AB/AB.HTM
11 HTTP://WWW.LICENSE.STATE.TX.US/AB/TECHMEMOS.HTM

NOTE: THE INFORMATION SHOWN IS PER MINIMUM/MAXIMUM CLEARANCES FOR ACCESSORIES IN ACCESSIBLE TOILET ROOMS AS PROVIDED BY THE 2012 TEXAS ACCESSIBILITY STANDARDS. NOTIFY THE ARCHITECT IF THERE ARE CONFLICTS PERTAINING TO THESE CLEARANCE OR ARRANGEMENT OF ACCESSORIES IN ACCESSIBLE TOILET ROOMS.

INFORMATION PROVIDED ON THIS SHEET IS NOT COMPREHENSIVE. REFER TO CHAPTER 6 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON PLUMBING ELEMENTS AND FACILITIES AND ADDTIONAL CHAPTERS OF THE 2012 TEXAS ACCESSIBILITY STANDARDS THAT APPLY.

GSC Architects
3100 Alvin Devane Blvd
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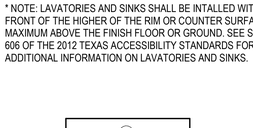
NOTE: IF THE BOTTOM OF LEADING EDGE OF THE DRINK FOUNTAIN IS MOUNTED MORE THAN 27" A.F.F., THE LEADING EDGE OF THE DRINKING FOUNTAIN CAN PROTRUDE A MAXIMUM OF 4" INTO WALKS, CORRIDORS, PASSAGEWAYS, HALLS OR AISLES

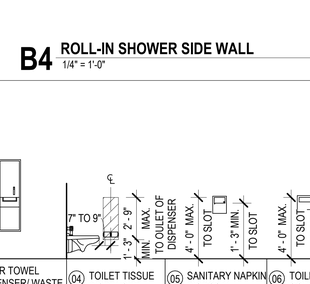
SEE SECTION 211 AND 602 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON DRINKING FOUNTAINS.



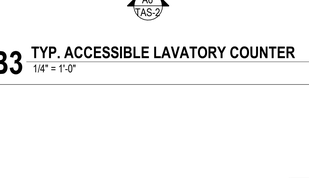
LOW FOUNTAIN SIDE ELEVATION

D6 DRINKING FOUNTAIN ELEVATION
1/4" = 1'-0"

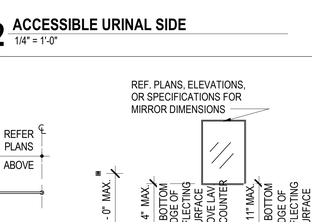
D5 ACCESSIBLE END STALL
1/4" = 1'-0"



D4 AMBULATORY ACCESSIBLE STALL
1/4" = 1'-0"



D3 ACCESSIBLE STALL SIDE
1/4" = 1'-0"



D2 TRANSFER SHOWER CONTROL WALL
1/4" = 1'-0"

C1 TRANSFER SHOWER SEAT WALL
1/4" = 1'-0"

C6 ACCESSIBLE STALL
1/4" = 1'-0"

NOTE: FLOOR SURFACE IN ROLL-IN STALL SHALL NOT SLOPE IN EXCESS OF 1:50 IN ANY DIRECTION

C5 ACCESSIBLE ROLL-IN SHOWER
1/4" = 1'-0"

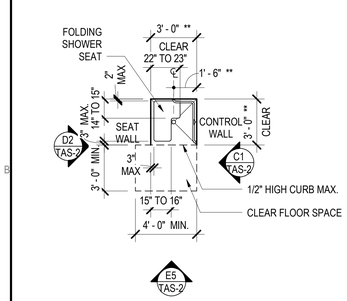
C4 ACCESSIBLE STALL FRONT
1/4" = 1'-0"

* NOTE: LAVATORIES AND SINKS SHALL BE INTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. SEE SECTION 606 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON LAVATORIES AND SINKS.

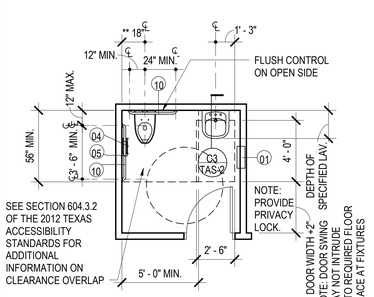
C3 TYPICAL LAVATORY / SINK SECTION
1/4" = 1'-0"

* NOTE: LAVATORIES AND SINKS SHALL BE INTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. SEE SECTION 606 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON LAVATORIES AND SINKS.

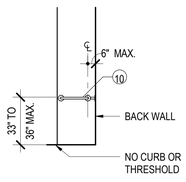
C2 TYP. LAVATORY / SINK COUNTER SECTION
1/4" = 1'-0"



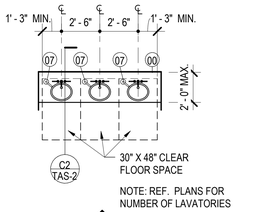
B6 ACCESSIBLE SHOWER
1/4" = 1'-0"



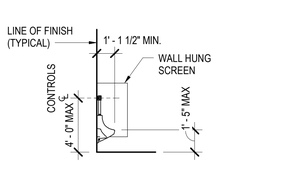
B5 SINGLE OCCUPANCY TOILET
1/4" = 1'-0"



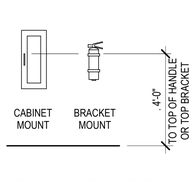
B4 ROLL-IN SHOWER SIDE WALL
1/4" = 1'-0"



B3 TYP. ACCESSIBLE LAVATORY COUNTER
1/4" = 1'-0"



B2 ACCESSIBLE URINAL SIDE
1/4" = 1'-0"



FIRE EXTINGUISHER CABINET OR BRACKET MOUNTING HEIGHT

B1 F.E.C. MOUNTING
1/4" = 1'-0"

KEY PLAN

NO.	REVISION	DATE

04/08/2021
BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:

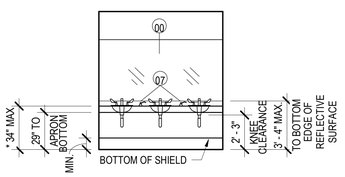
ACCESSIBILITY INFORMATION

DATE: 04/08/2021
REVIEWED BY: GSC
PROJECT NO.: 202001400
SHEET NO.:

TAS-2

ST. ELMO SERVICE CENTER 8 RENOVATIONS

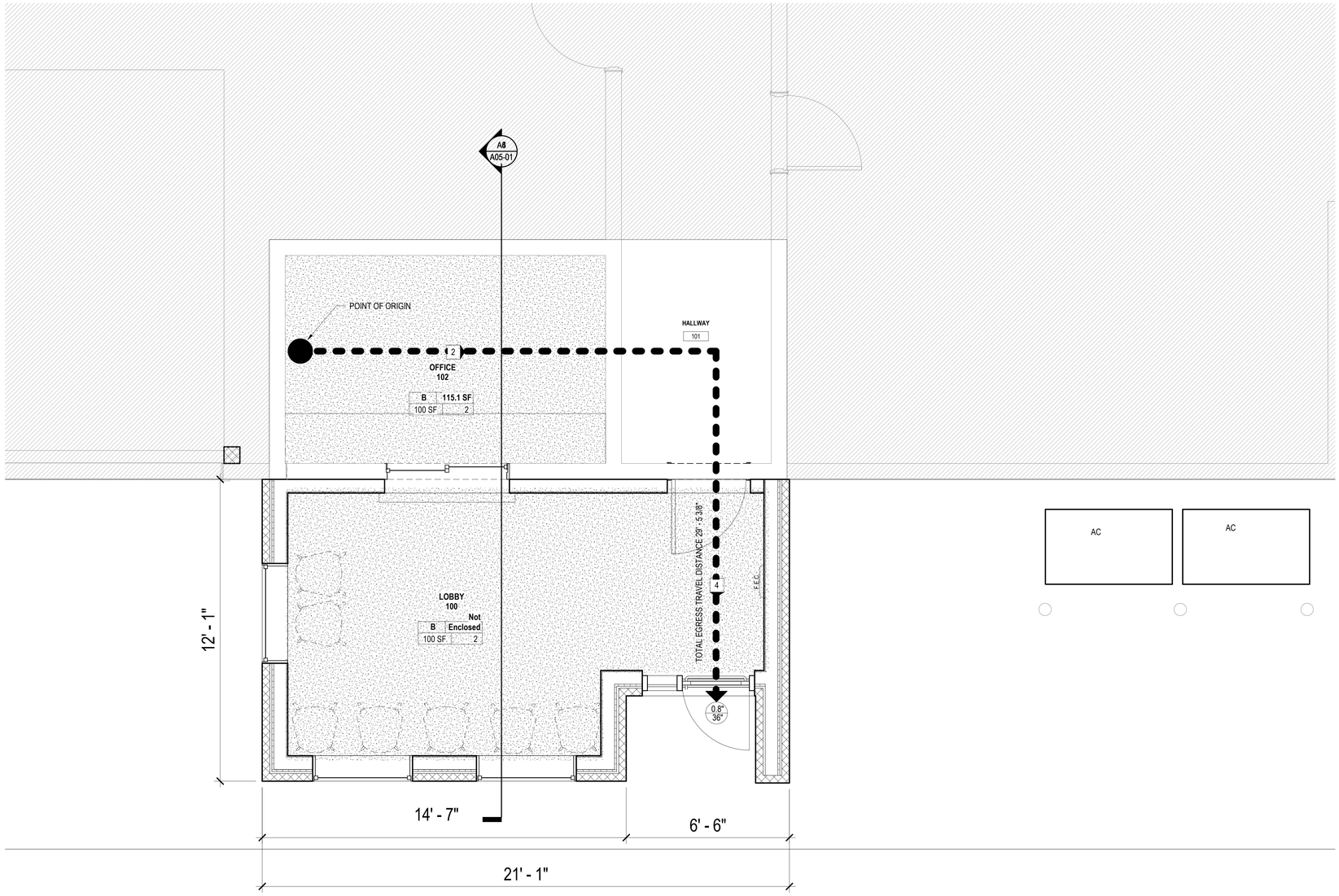
* NOTE: LAVATORIES AND SINKS SHALL BE INTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. SEE SECTION 606 OF THE 2012 TEXAS ACCESSIBILITY STANDARDS FOR ADDITIONAL INFORMATION ON LAVATORIES AND SINKS.



A6 TYP. LAVATORY COUNTER FRONT
1/4" = 1'-0"

ACCESSIBLE MOUNTING HEIGHTS

ACCESSORY SPECIFICATION NO.	00 UNFRAMED MIRROR	01 PAPER TOWEL DISPENSER/ WASTE RECEPTACLE	04 TOILET TISSUE DISPENSER	05 SANITARY NAPKIN DISPOSAL	06 TOILET SEAT COVER DISPENSER	07 COUNTER MOUNTED SOAP DISPENSER	08 SURFACE MOUNTED SOAP DISPENSER	09 SANITARY NAPKIN DISPENSER/ VENDING MACHINE	10 GRAB BAR	11 ROBE HOOK	12 FRAMED MIRROR	14 SHOWER ROD	17 TOWEL BAR	19 DIAPER CHANGING STATION	24 HAND DRYER
WALL REINFORCEMENT DETAIL REFER TO PARTITION TYPE DETAILS SHEET	B	B	A	A	A		A	A	C	B	B	B	C	A	B
DESIGN TYPE REFER TO SPECIFICATIONS IF NONE CALLED OUT			CONTINUOUS FEED												



A6 FLS - LEVEL 1
1/2" = 1'-0"

LEGEND

- 1 HOUR FIRE
- 2 HOUR FIRE
- 3 HOUR FIRE
- 4 HOUR FIRE
- SMOKE BARRIER
- EGRESS PATH
- 200' EXIT RADIUS

OCCUPANCY TYPE
OCCUPANT LOAD FACTOR
ROOM NAME
ROOM NUMBER
S.F.
200
##
ROOM AREA
OCCUPANT LOAD
0
OCCUPANT LOAD @ POINT
0"
0"
REQUIRED EXIT WIDTH
PROVIDED EXIT WIDTH
BUSINESS AREAS
100 GROSS SQ. FT. PER PERSON
UNASSIGNED
100 GROSS SQ. FT. PER PERSON

BUILDING CODE ANALYSIS
APPLICABLE CODES:

RENOVATION DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES:

2015 IBC WITH CITY OF AUSTIN. AMENDMENTS
2015 IFC WITH CITY OF AUSTIN. AMENDMENTS
2015 UMC WITH CITY OF AUSTIN. AMENDMENTS
2015 UPC WITH CITY OF AUSTIN. AMENDMENTS
2017 NEC WITH CITY OF AUSTIN. AMENDMENTS
2015 IECC WITH CITY OF AUSTIN. AMENDMENTS
2015 TEXAS ACCESSIBILITY STANDARDS

CONSTRUCTION TYPE: II-B
FIRE RESISTANCE RATING FOR BUILDING ELEMENTS: 0 HOURS
- PRIMARY STUCTURE FRAME: 0 HRS
- BEARING WALL EXT/INT: 0/0 HRS
- NONBEARING WALL INT: 0 HRS
- FLOOR CONST. & ASSOC. SECONDARY MEMBERS: 0 HRS
- ROOF CONST. & ASSOC. SECONDARY MEMBERS: 0 HRS

NUMBER OF STORIES: 1

OCCUPANCY TYPE:
MIXED USE:
B - BUSINESS

OCCUPANCY LOAD FACTOR:
B: 1 PER 100 SQ.FT.

TOTAL SQUARE FEET LEVEL 1 : 368.18 SF
OCCUPANCY LOAD:

B - BUSINESS=	4	3
TOTAL=	4	3

AUTOMATIC SPRINKLER SYSTEM: YES
COMMON PATH OF EGRESS TRAVEL (TABLE 1006.21):
- REQUIRED: 100'-0" MAX

EXIT ACCESS TRAVEL DISTANCE (1017.2):
- REQUIRED: 300'-0" MAX
- PROVIDED: 29' - 5 3/8"

F.E.C. BASIS OF DESIGN
SEMI RECESSED CABINET (STAINLESS STEEL)

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN FOUNDED 1839

ST. ELMO SERVICE CENTER 8
RENOVATIONS

KEY PLAN

NO.	REVISION	DATE

REGISTERED ARCHITECT BONITA TRICE GRAY 13015 STATE OF TEXAS
04/08/2021
BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:

FIRE & LIFE SAFETY PLAN - LEVEL 1

DATE: 04/08/2021
REVIEWED BY: Checker
PROJECT NO.: 202001400
SHEET NO.:

FLS-1

GSC - 202001400 ST. ELMO SERVICE CENTER 8 RENOVATIONS

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4/12/2021 1:27:10 PM

GENERAL CONSTRUCTION NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. CONTRACTOR SHALL CALL THE ONE CALL CENTER (DIAL 811) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.
3. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION OF THE CITY'S ONE STOP SHOP (OSS) AT 512-974-6360 OR 974-7034 AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET R.O.W. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S R.O.W. MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.
4. FOR SLOPES OR TRENCHES GREATER THAN FIVE FEET IN DEPTH, A NOTE MUST BE ADDED STATING: "ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION." (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, AUSTIN TEXAS.)
5. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
6. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS THAT ARE REQUIRED TO COMPLY WITH SECTIONS 15-12-161 THROUGH 15-12-181 OF THE CITY CODE REGARDING EXCAVATION IN PUBLIC RIGHT OF WAY.
7. WHEN THERE IS A CONFLICT BETWEEN PROJECT PLANS AND PROJECT SPECIFICATIONS, THE APPROVED PROJECT PLANS WILL GOVERN.
8. ALL DAMAGE CAUSED DIRECTLY OR INDIRECTLY TO THE STREET SURFACE, SIDEWALK, DRIVEWAY, CURB & GUTTER, OR SUBSURFACE OUTSIDE OF THE PAVEMENT CUT AREA SHALL BE REPAIRED/REPLACED AS PART OF THE STREET CUT REPAIR. THIS INCLUDES ANY SCRAPES, GOUACHES, CUTS, CRACKING, DEPRESSIONS, AND/OR ANY OTHER DAMAGE CAUSED BY THE CONTRACTOR DURING THE EXECUTION OF THE WORK. THESE REPAIRS WILL BE INCLUDED IN THE TOTAL AREA OF RESTORATION. THESES AREAS SHALL BE SAW CUT IN STRAIGHT, NEAT LINES, PARALLEL TO THE EXCAVATION OR UTILITY TRENCH AND TO THE NEXT EXISTING JOINT FOR SIDEWALKS AND CURB & GUTTER. ALL SUCH REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL MEET ALL CITY TESTING REQUIREMENTS, STANDARDS, AND SPECIFICATIONS.

APPENDIX P-2:
CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
2. PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
3. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIP LINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE) , FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE. IN ORDER TO PREVENT THE FOLLOWING:
   - A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   - B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ABORIST;
   - C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   - D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
6. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   - A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
   - B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZED ROOT DAMAGE);
   - C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING;
   - D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY ARBORIST AT 974-1876 TO DISCUSS ALTERNATIVES.

SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.

7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FT (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
8. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
10. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.)
13. ALL FINISHED PRUNING SHALL BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE CITY ARBORIST).
14. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NON-COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

SPECIAL CONSTRUCTION TECHNIQUES:

1. PRIOR TO EXCAVATION WITHIN TREE DRIPLINES, OR THE REMOVAL OF TREES ADJACENT TO OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.
2. IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING, AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH A MINIMUM OF 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. IN AREAS WITH HIGH SOIL PLASTICITY GEOTEXTILE FABRIC, PER STANDARD SPECIFICATION 620S, SHOULD BE PLACED UNDER THE MULCH TO PREVENT EXCESSIVE MIXING OF THE SOIL AND MULCH. ADDITIONALLY, MATERIAL SUCH AS PLYWOOD AND METAL SHEETS, COULD BE REQUIRED BY THE CITY ARBORIST TO MINIMIZE ROOT IMPACTS FROM HEAVY EQUIPMENT. ONCE THE PROJECT IS COMPLETED, ALL MATERIALS SHOULD BE REMOVED, AND THE MULCH SHOULD BE REDUCED TO A DEPTH OF 3 INCHES.
3. PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
4. WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY AS NECESSARY DURING PERIODS OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.

ACCESSIBILITY NOTES:

1. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP. [TAS 4.3.7]
2. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 IN. [TAS 4.8.2]
3. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. [TAS 4.3.7]
4. GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT. [TAS 4.5.1]

GENERAL UTILITY NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL COST OF RELOCATION OR DAMAGE TO UTILITIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS/HER FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
3. THE ENGINEER, IN PREPARING THESE PLANS HAS ATTEMPTED TO LOCATE ALL EXISTING UTILITIES IN THE AREAS OF EXPANSION OR NEW CONSTRUCTION. HOWEVER, THERE MAY BE UTILITIES THAT COULD NOT BE OR WERE NOT LOCATED.
4. UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK.
5. CONTRACTOR SHALL CALL APPROPRIATE UTILITY COMPANIES FOR LOCATIONS OF THEIR UTILITIES AT LEAST 48 HOURS BEFORE COMMENCING EXCAVATION. IN THE EVENT THAT A UTILITY IS SITUATED SUCH THAT CONSTRUCTION CANNOT PROCEED AS SHOWN ON THE PLANS, THE OWNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
6. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION, ADJUSTMENT, OR RELOCATION OF EXISTING UTILITIES AS DESIGNATED ON PLANS.
7. CONTRACTOR SHALL PROVIDE BOLLARDS FOR PROTECTION OF ALL ABOVE GROUND UTILITIES AND APPURTENANCES IN DRIVE AREAS.
8. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH LOCAL UTILITY REQUIREMENTS AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
9. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES IS TEN (10) FEET. THE MINIMUM VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES IS EIGHTEEN (18) INCHES.
10. THE TOP ELEVATION OF MANHOLES IN PAVED AREAS SHALL MATCH FINISH GRADE. THE TOP ELEVATION OF MANHOLES IN UNPAVED AREAS SHALL BE 3" (MIN.) ABOVE FINISH GRADE.
11. CONTRACTOR SHALL COORDINATE INSPECTION OF UTILITY LINES WITH APPROPRIATE AUTHORITIES PRIOR TO BACKFILLING TRENCHES.
12. SANITARY SEWER PIPE (6-INCH TO 15-INCH DIAMETER) SHALL BE PVC, ASTM D-3034 SDR 26 OR LESS WITH A MINIMUM PIPE STIFFNESS OF 115 PSI AND ELASTOMERIC GASKET JOINTS MEETING ASTM D 3212 AND GASKETS MEETING F 477, UNLESS OTHERWISE NOTED.
13. ALL WATER LINE PIPE WITHIN AN EASEMENT OR PUBLIC R.O.W SHALL BE D.I. PIPE (CLASS 350 UP TO 12-INCH DIAMETER AND CLASS 250 FOR 16-INCH DIAMETER AND LARGER) AND SHALL MEET ALL APPLICABLE CITY OF AUSTIN DETAILS AND SPECIFICATIONS UNLESS OTHERWISE APPROVED BY THE CITY OF AUSTIN AND THE ENGINEER.
14. ALL PRIVATE WATER LINE OR FIRE LINE PIPE SHALL BE AWWA C900 DR-14 CLASS 200 PVC (4-INCH THROUGH 12-INCH DIAMETER) OR CLASS 350 DUCTILE IRON PIPE. ALL DOMESTIC WATER PIPE SHALL BE SCH. 40 PVC.
15. ALL PRIVATE WATER AND WASTEWATER LINES WILL COMPLY WITH THE W2018 UNIFORM PLUMBING CODE OR LATEST VERSION.
16. ALL PRIVATE FIRE SPRINKLER LINES WILL COMPLY WITH NFPA-24 REQUIREMENTS.
17. ALL WATER AND WASTEWATER LINES IN PUBLIC R.O.W. AND EASEMENTS WILL MEET THE CITY OF AUSTIN WATER UTILITY DETAILS AND SPECIFICATIONS, AT A MINIMUM.
18. ALL BACKFLOW DEVICES WILL CARRY A MANUFACTURER RATING NOT TO EXCEED A 7 P.S.I. PRESSURE DROP THROUGH BACKFLOW DEVICE.
19. CITY MAINTENANCE OF UTILITIES ENDS AT THE PROPERTY LINE UNLESS THE UTILITY IS IN AN EASEMENT.
20. PROVIDE DUAL CLEAN-OUTS AT BUILDING POINT CONNECTIONS ON WASTEWATER LINE PER CITY OF AUSTIN STANDARDS (MIN. 100' O.C.).
21. EXTEND ALL EXISTING UTILITY MANHOLES, BOXES, COVERS, ETC. TO PROPOSED FINISH GRADE, UNLESS APPROVED OTHERWISE.
22. ALL UNDERGROUND UTILITY CONSTRUCTION WITHIN CITY R.O.W. OR PUBLIC EASEMENTS MUST BE ACCOMPLISHED IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS SERIES 500.
23. THE CITY STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL GOVERN MATERIAL AND METHODS USED TO DO THIS WORK.
24. CONTRACTOR MUST OBTAIN A STREET CUT PERMIT FROM TRANSPORTATION AND PUBLIC SERVICES DEPARTMENT BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.
25. AT LEAST FORTY-EIGHT (48) HOURS BEFORE BEGINNING ANY WATER AND WASTEWATER CONSTRUCTION IN PUBLIC R.O.W. OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY TRANSPORTATION AND PUBLIC SERVICES INSPECTION DIVISION FOR MAIN LINE CONSTRUCTION, OR WATER AND WASTEWATER UTILITY TAPS INSPECTION FOR TAPS ONLY CONSTRUCTION.
26. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT **1-800-344-8377** FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION.
27. IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.
28. THE CITY OF AUSTIN WATER AND WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W./EASEMENT LINES.
29. NO OTHER UTILITY SERVICE/APPURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER AND WASTEWATER SERVICES.
30. THE CITY SPECIFICATION ITEM 509 WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE. CONTRACT DOCUMENTS WHICH INCLUDE A TRENCH SAFETY PLAN AND A PAY ITEM FOR TRENCH SAFETY MEASURES, IN COMPLIANCE WITH TEXAS HOUSE BILL 1569, MUST BE RECEIVED BY TRANSPORTATION AND PUBLIC SERVICES CONTRACT ADMINISTRATION OFFICE BEFORE BEGINNING WORK ON THE PROJECT.
31. ALL MATERIALS TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE DEVELOPER IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 1804.04.
32. PRESSURE TAPS SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 510.3(24). THE CONTRACTOR SHALL DO ALL EXCAVATION ETC., AND SHALL FURNISH, INSTALL AND AIR TEST THE SLEEVE AND VALVE. IF A PRIVATE CONTRACTOR MAKES THE TAP, A CITY INSPECTOR MUST BE PRESENT. WITH TWO (2) WORKING DAYS (MIN.) NOTICE, CITY CREWS CAN MAKE TAPS UP TO TWELVE (12) INCHES, AT THE CONTRACTOR'S EXPENSE; FISCAL ARRANGEMENTS MUST BE MADE IN ADVANCE AT THE TAPS OFFICE, 625 EAST 10TH STREET. "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED, UNLESS MADE BY USE OF AN APPROVED FULL CIRCLE-GASKETED TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES TWENTY-FOUR (24) HOURS PRIOR TO MAKING THE WET TAP.
33. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(22).
34. FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 511.4(2).
35. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEMS 510.3 (27)-(29). FORCE MAIN TESTING SHALL BE CONDUCTED AT THE PRESSURES SHOWN ON THE PLANS.
36. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
37. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS OR DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL DESIGN AND MAINTAIN ALL SUPPORT SYSTEMS, SLOPING, BENCHING, AND OTHER MEANS OF PROTECTION AND PROVIDE PLANS FOR TRENCH SAFETY DEVELOPED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER.
38. COORDINATION DRAWINGS: CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SHOWING PIPE SIZES, LOCATIONS AND ELEVATIONS. SHOW OTHER PIPING IN SAME TRENCH AND CLEARANCES. INDICATE INTERFACE AND SPATIAL RELATIONSHIP BETWEEN MANHOLES, PIPING AND PROXIMATE STRUCTURES.
39. ALL SHUT-DOWNS MUST BE SCHEDULED AT LEAST SEVEN(7) BUSINESS DAYS IN ORDER FOR THE UT PROJECT MANAGER TO NOTIFY ALL THE AFFECTED NEARBY BUILDINGS.
40. NEW STORM SEWERS OUTSIDE THE BUILDING SHALL BE VIDEO INSPECTED AND GRADED USING NATIONAL ASSOCIATION OF SEWER SERVICES COMPANIES PIPELINE ASSESSMENT CERTIFICATION PROGRAM GRADING FORMS. VIDEO AND COMPLETED GRADING FORMS SHALL BE TURNED OVER TO OWNER. VIDEO SHALL BE IN COLOR, WITH ON-SCREEN FOOTAGE COUNTER AND BE SUPPLIED TO OWNER WITH A SITE MAP SHOWING ENTRY AND EXIT LOCATIONS AND DEPTHS KEYED TO ON-SCREEN INFORMATION. VIDEO SHALL BE CREATED BY A COMPANY REGULARLY ENGAGED IN THE BUSINESS OF SEWER VIDEO INSPECTION. SANITARY AND STORM SEWERS SHALL BE RECORDED SEPARATELY.

GRADING NOTES:

1. TOPOGRAPHIC INFORMATION IS PROVIDED BY THE OWNER.
2. IF CONTRACTOR FINDS A DISCREPANCY WITH THE TOPOGRAPHIC INFORMATION ON THESE PLANS, HE/SHE SHOULD CONTACT THE CONSTRUCTION MANAGER/SUPERVISOR IMMEDIATELY.
3. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AND GRADED TO DRAIN WITH A MIN 2% SLOPE.
4. ANY TEMPORARY SPOILS STOCKPILE MUST BE LOCATED OUTSIDE OF ANY TREE DRIPLINES AND IN THE TEMPORARY SPOILS AREA DESIGNATED ON THE APPROVED PLANS. ALL SURPLUS MATERIAL WILL BE DISPOSED OF OFF SITE
5. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE CITY OF AUSTIN ENVIRONMENTAL INSPECTION AT (512) 974-2278 AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE REMOVAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL. ALL BILLS OF LADING SHALL BE STORED ON-SITE FOR REVIEW UNTIL PROJECT COMPLETION.
6. ALL DEBRIS AND EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE IN A MANNER NOT TO DAMAGE THE OWNER PRIOR ACCEPTANCE OF THE PROJECT.
7. THE GEOTECHNICAL ENGINEER SHALL APPROVE ALL FILL MATERIAL PROVIDED PRIOR TO PLACING AND COMPACTING. THE PLASTICITY INDEX MUST BE LESS THAN 15.
8. UNLESS NOTED OTHERWISE, SPREAD FILL MATERIAL IN 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% TO 105% OF THE MAXIMUM DENSITY, AS DETERMINED BY THE SDHPT TEST METHOD TEX 113-E, WITHIN +/- 3% OF THE OPTIMUM MOISTURE CONTENT FOR ALL PLACEMENT OF FILL MATERIAL.
9. A GEOTECHNICAL ENGINEER MUST PREPARE GEOTECHNICAL RECOMMENDATIONS AND PROVIDED A COPY TO THE CIVIL ENGINEER FOR PLACEMENT OF FILL FOR BERMS, DRAINAGE SWALES, CHANNELS, FILTER PONDS, DETENTION PONDS, AND OTHER SIMILAR AREAS.
10. ALL SLOPES GREATER THAN 3 TO 1 SHALL BE STABILIZED BY RIP RAP OR OTHER APPROVED METHODS. A STRUCTURAL ENGINEER MUST PROVIDE DETAILS FOR CONCRETE OR ROCK RIP RAP. EARTH SLOPES GREATER THAN 3 TO 1 WILL REQUIRE RECOMMENDATIONS FROM A GEOTECHNICAL ENGINEER AND/OR STRUCTURAL ENGINEER.

STANDARD SPECIFICATIONS

1. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO STARTING WORK ON THE SITE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES THAT ARE NOT SHOWN ON THE PLANS TO BE REMOVED.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING THAT IS NOT SHOWN ON THE PLANS TO BE REMOVED.
4. EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF AUSTIN STANDARDS.
5. CONTRACTOR SHALL SUBMIT MATERIAL SUBMITTALS FOR ALL PIPE, FITTINGS, FIXTURES, VALVES, BOXES, INLETS, COVERS, RINGS, BEDDING, AND ANY OTHER MATERIAL ASSOCIATED WITH UNDERGROUND UTILITY CONSTRUCTION. UNLESS SPECIFICALLY NOTED IN THE CONTRACT DOCUMENTS, ALL CONSTRUCTION SHALL COMPLY WITH CITY OF AUSTIN SPECIFICATIONS. IN ADDITION, ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S SPECIFICATIONS. APPROVAL OF A SUBMITTED MATERIAL DOES NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO PROPERLY INSTALL MATERIALS.
6. ALL DISTURBED AREAS MUST BE REVEGETATED BY CONTRACTOR AS REQUIRED BY CITY OF AUSTIN STANDARDS. (REGARDLESS OF WHO IS RESPONSIBLE FOR SITE LANDSCAPING)
7. UNLESS SPECIFICALLY NOTED IN THE CONTRACT DOCUMENTS, ALL SITE CONCRETE, PAVING, STRIPING AND SIGNAGE SHALL COMPLY WITH CITY OF AUSTIN SPECIFICATIONS.
8. UNLESS SPECIFICALLY NOTED IN THE CONTRACT DOCUMENTS, NO WORK SHALL TAKE PLACE OUTSIDE THE BOUNDARIES OF THE LIMITS OF CONSTRUCTION. IN THE EVENT THAT WORK NEEDS TO TAKE PLACE OFFSITE, THE OWNER'S REPRESENTATIVE MUST BE NOTIFIED TWO WEEKS PRIOR TO THE WORK, SO THAT THE PROPER COORDINATION MAY TAKE PLACE. NO OFFSITE WORK, INCLUDING STORAGE OF MATERIAL OR STAGING, MAY TAKE PLACE OFFSITE WITHOUT APPROVAL FROM OWNER'S REPRESENTATIVE.
9. ADEQUATE TREE PROTECTION MUST BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. ALL TREES SHOWN TO BE PROTECTED IN THE CONTRACT DOCUMENTS ARE TO REMAIN, UNLESS SPECIFIC, WRITTEN PERMISSION IS GRANTED FOR THE REMOVAL BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY TREE LOST DUE TO CONTRACTOR'S NEGLIGENCE. IN AREAS WHERE A TREE WELL CONDITION EXISTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY COMPACTED SOIL FROM THE TREE'S CRITICAL ROOT ZONE TO ENSURE WATER CAN INFILTRATE PROPERLY.
10. CONTRACTOR SHALL KEEP ALL ADJACENT ROADWAYS CLEAR OF DIRT, MUD AND DUST THROUGH THE DURATION OF CONSTRUCTION. PERIODIC CLEANING OF ROADWAYS WILL BE REQUIRED AS DEEMED NECESSARY BY OWNER'S REPRESENTATIVE.
11. ALL TRENCHES MADE UNDER AREAS TO BE PAVED SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
12. MME, CONTRACTOR SHALL FORWARD A COPY OF A "FORM SURVEY" TO OWNER'S REPRESENTATIVE PRIOR TO POURING BUILDING SLABS. CONTRACTOR SHALL ALSO FORWARD A COPY TO OWNER'S REPRESENTATIVE OF ALL MATERIALS REQUIRED UNDER THE CITY OF AUSTIN SPECIAL INSPECTIONS CHECKLIST.
13. PRIOR TO ACCEPTANCE BY OWNER, ALL STORMWATER DRAINAGE PIPING, BOXES AND STRUCTURES SHALL BE CLEAN AND FREE OF SEDIMENT. IN ADDITION, THE FILTER MEDIA ASSOCIATED WITH ANY WATER QUALITY STRUCTURES ON THE PROJECT SHALL BE CLEAN AND FREE OF DEBRIS. CONTRACTOR SHALL TEMPORARILY PROTECT AGAINST THE INFILTRATION OF SEDIMENTS INTO THE SAND FILTER DURING CONSTRUCTION BY COVERING WITH AN 8OZ. NONWOVEN FILTER FABRIC.
14. CONTRACTOR SHALL STOCKPILE TOPSOIL AND MACHINE GRADE WITHIN 2 INCHES OF TOP OF CURB WITH ONSITE MATERIAL, WHICH SHALL BE FREE OF ROCKS AND OTHER DEBRIS. VERIFY GRADE WITH LANDSCAPE SPECIFICATIONS.
15. PRIOR TO PLACEMENT, CONTRACTOR MUST SUBMIT PROPOSED ROAD/PARKING LOT BASE MATERIAL TO OWNER FOR TESTING BY OWNER'S TESTING LABORATORY. ONLY BASE MATERIAL APPROVED BY OWNER MAY BE USED. REFER TO PROJECT GEOTECHNICAL REPORT FOR EXACT SPECIFICATIONS.

PAVING CONSTRUCTION NOTES:

1. CONCRETE SHALL BE PORTLAND CEMENT CONCRETE AND HAVE A COMPRESSIVE STRENGTH OF 2700 PSI AT 7 DAYS AND 4,000 PSI MINIMUM AT 28 DAYS. REBARS SHALL BE ASTM A615 STEEL.
2. EXISTING PAVING, IN PUBLIC STREET RIGHT-OF-WAY OR EASEMENTS, DAMAGED BY CONSTRUCTION SHALL BE REPAIRED PER CITY OF AUSTIN STANDARDS. EXISTING PAVING, NOT SHOWN TO BE REMOVED, DAMAGED BY CONSTRUCTION SHALL BE REPAIRED IN ACCORDANCE WITH THE DETAILS CONTAINED IN THE PLANS.
3. EXISTING CURBS, SIDEWALKS, AND DRIVEWAYS IN PUBLIC STREET RIGHT-OF-WAY OR EASEMENTS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF AUSTIN STANDARDS. ALL OTHER CURBS, SIDEWALKS, AND DRIVEWAYS, NOT SHOWN TO BE REMOVED, DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH THE DETAILS CONTAINED IN THE PLANS.
4. ALL ROAD WIDTHS, RADII AND ALIGNMENT SHOWN INDICATE FACE OF CURB OR EDGE OF PAVEMENT WHICHEVER IS APPLICABLE. CONCRETE SHALL BE DESIGNED TO EXHIBIT A FLEXURAL STRENGTH (3-POINT LOADING) OF AT LEAST 550 PSI AT 28 DAYS.
5. CONCRETE PAVEMENTS SUPPORTING VEHICULAR TRAFFIC SHALL BE PORTLAND CEMENT CONCRETE AND HAVE A COMPRESSIVE STRENGTH OF 3,500 PSI MINIMUM AT 7 DAYS AND 4,000 PSI MINIMUM AT 28 DAYS. REBARS SHALL BE ASTM A615 STEEL.

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CITY OF AUSTIN
FOUNDED 1839

MARTINEZ ENGINEERING
TBPE Firm Registration No. F-16723

CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

STATE OF TEXAS
ALFRED J. HAJKA
129815
LICENSED PROFESSIONAL ENGINEER

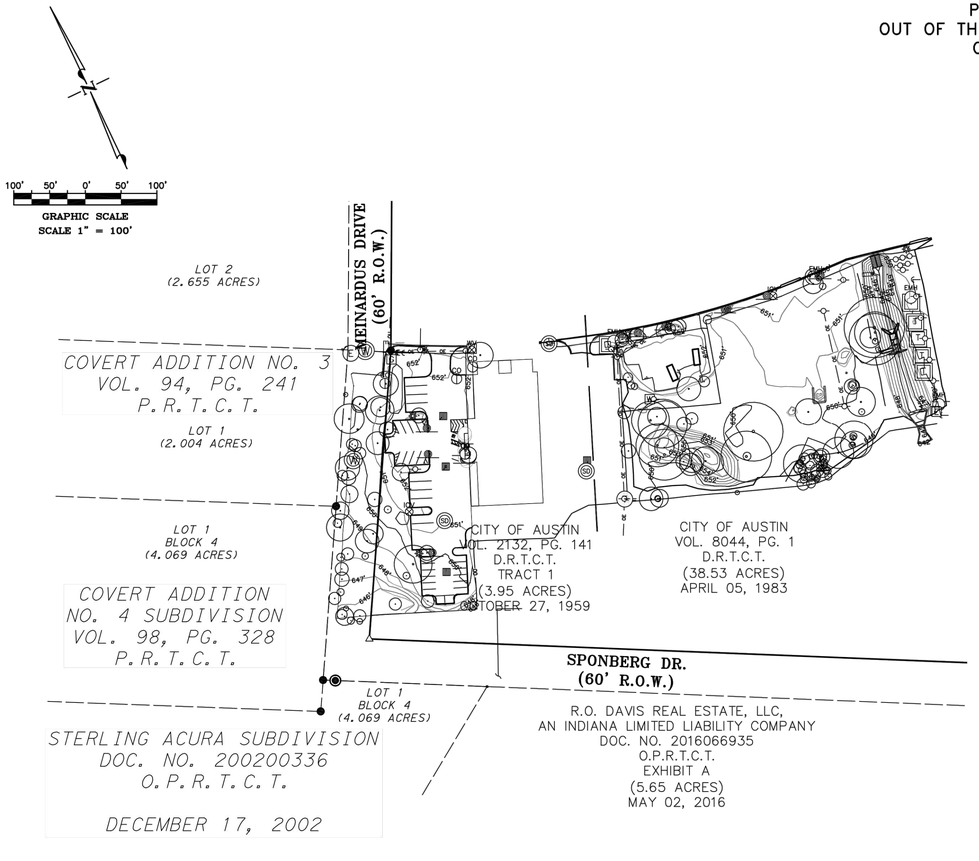
TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
GENERAL NOTES

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: GN1

PARTIAL TREE AND TOPOGRAPHIC SURVEY
OUT OF THE SANTIAGO DEL VALLE GRANT, ABSTRACT NO. 24
CITY OF AUSTIN, TRAVIS COUNTY, TEXAS



TAG No.	Bole Diameter	Tree Type	DripLine Dia	Point No	Bole Size
2301	7.5"	Mulberry	7.5'	1340	4X4X3
2302	16.75"	Huisache	16.75'	1341	(MULTI)
2303	4.5"	Hackberry	4.5'	1343	2X2X1X1X1
2304	5"	Hackberry	5'	1344	2.5X1X1X1X1X1
2305	5.25"	Huisache	5.25'	1345	2.5X2.5X1X1X1
2306	11"	Ash	11'	1373	
2307	7.5"	Ash	7.5'	1374	(MULTI)
2308	3"	Hackberry	3'	1375	
2309	10"	Hackberry	10'	1376	7X3.5X2.5
2310	7"	Hackberry	7'	1377	
2311	9.5"	Crape myrtle	9.5'	1378	(MULTI)
2312	9"	Pecan	9'	1521	
2313	4.75"	Mountain Laurel	4.75'	1571	3.5X2.5
2314	26.5"	Live Oak	26.5'	1572	13X10X9X8
2315	8.25"	Huisache	8.25'	1573	5X2.5X2X2
2316	10.5"	Mountain Laurel	10.5'	1574	6X5X4
2317	5"	Pecan	5'	1575	
2318	12.25"	Scarlet Firethorn	12.25'	1577	4X4X3.5X3X3X3
2319	10.5"	Mountain Laurel	10.5'	1895	6.5X4X4
2320	11.5"	Mountain Laurel	11.5'	1896	5X4.5X3.5X2.5X2.5
2321	13"	Hackberry	13'	3836	
2322	7.5"	Ash	7.5'	3837	6X3
2323	3.5"	Ash	3.5'	3838	
2324	4"	Chinaberry	4'	3839	
2325	26.5"	Waxleaf Ligustrum	26.5'	3840	(MULTI)
2326	5.5"	Hackberry	5.5'	3841	
2327	8.5"	Hackberry	8.5'	3842	
2328	6"	Waxleaf Ligustrum	6'	3843	
2329	5"	Hackberry	5'	3844	
2330	5.5"	Hackberry	5.5'	3845	
2331	3"	Waxleaf Ligustrum	3'	3846	
2332	5"	Hackberry	5'	3847	4X2
2333	5"	Hackberry	5'	3848	
2334	3.5"	Gum Bumelia	3.5'	3849	
2335	3.5"	Hackberry	3.5'	3850	3X1
2336	6"	Ash	6'	3851	
2337	4"	Hackberry	4'	3852	
2338	6.5"	Waxleaf Ligustrum	6.5'	3853	3X3X2X2
2339	3"	Gum Bumelia	3'	3854	
2340	9"	Hackberry	9'	3855	
2341	3"	Hackberry	3'	3856	
2342	4"	Hackberry	4'	3857	
2343	4"	Hackberry	4'	3858	3X2
2344	8.5"	Waxleaf Ligustrum	8.5'	3859	4X3X3X3
2345	4.5"	Ash	4.5'	3860	3X3
2346	5.5"	Ash	5.5'	3861	
2347	5"	Ash	5'	3862	
2348	5.5"	Hackberry	5.5'	3863	
2349	6"	Waxleaf Ligustrum	6'	3864	3X2X2X2
2350	6"	Cedar	6'	3865	
2351	4"	Ash	4'	3866	
2352	4"	Ash	4'	3867	
2353	3"	Ash	3'	3868	
2354	8.5"	Ash	8.5'	3869	6X5
2355	11.5"	Ash	11.5'	3870	10X3
2356	3"	Ash	3'	3871	
2357	4.5"	Ash	4.5'	3872	
2358	5"	Hackberry	5'	3873	
2359	3"	Hackberry	3'	3874	
2360	5"	Hackberry	5'	3875	3.5X3
2361	8.5"	Ash	8.5'	3876	
2362	21.75"	Mesquite	21.75'	3877	(MULTI)
2364	4.5"	Mesquite	4.5'	3878	3X3
2365	3"	Mesquite	3'	3879	
2363	19"	Mesquite	19'	3880	8X7X5X4X3X3
2366	26.75"	Mesquite	26.75'	3881	(MULTI)
2367	3"	Hackberry	3'	3882	
2368	4"	Hackberry	4'	3883	
2369	5"	Hackberry	5'	3884	
2370	4.25"	Mesquite	4.25'	3885	3X2.5
2371	20.25"	Mesquite	20.25'	3886	10X6.5X4X4X3X3
2372	10.75"	Mesquite	10.75'	3887	5X4X3.5X2.5X1.5
2373	4.5"	Mesquite	4.5'	3888	3X3
2374	7.5"	Mesquite	7.5'	3889	3.5X3X3X2
2375	18.5"	Mesquite	18.5'	3890	(MULTI)
2376	25"	Mesquite	25'	3891	(MULTI)
2377	5.5"	Mulberry	5.5'	3892	4X3
2378	35.5"	Mesquite	35.5'	3893	(MULTI)
2379	14"	Sycamore	14'	3895	
2380	4.5"	Hackberry	4.5'	3896	3X3
5101	3"	Hackberry	3'	3899	
5102	10"	American Elm	10'	3900	
5103	11"	American Elm	11'	3901	
5104	17.5"	Hackberry	17.5'	3902	10X8X7
5105	13.5"	Ash	13.5'	3903	9X9
5106	20"	Ash	20'	3904	15X10
5107	4"	Mesquite	4'	3905	
5108	21"	Mesquite	21'	3906	14X14
5109	8"	Ash	8'	3907	
5110	8.5"	Hackberry	8.5'	3908	
5111	8"	Ash	8'	3909	
5112	16"	Ash	16'	3910	12X8
5113	17"	Live Oak	17'	3912	9X8X8
5114	10"	Mesquite	10'	3913	7X6
5115	7.5"	Mesquite	7.5'	3914	5.5X4
5116	12"	Hackberry	12'	3915	
5117	10"	Ash	10'	3916	7X6
5118	14"	Mesquite	14'	3917	10.5X7
5119	16.5"	Mesquite	16.5'	3918	10X7X6
5120	12.25"	Mesquite	12.25'	3919	9X3X2.5X1
5121	6"	Mesquite	6'	3920	
5122	19"	Ash	19'	3921	8.5X8X7X6
5123	5.5"	Mesquite	5.5'	3922	
5124	8.5"	Mesquite	8.5'	3923	
5125	9"	Cedar Elm	9'	3924	7X4
5126	10"	Cedar Elm	10'	3925	7X6
5127	5"	Mesquite	5'	3926	
5128	8.5"	Mesquite	8.5'	3927	5X4X3
5129	7"	Cedar Elm	7'	3928	
5130	3.5"	Mesquite	3.5'	3929	
5131	10.5"	Mesquite	10.5'	3930	4X4X3X3X3
5132	5"	Hackberry	5'	3931	
5133	8.5"	Mesquite	8.5'	3932	4X4X2X2X1
5134	4"	Mesquite	4'	4265	
5135	4.5"	Mesquite	4.5'	4266	
5136	8"	Mesquite	8'	4267	3.5X2.5X2X2X2X1.5
5137	10"	Mesquite	10'	4268	5.5X5.5X3.5
5138	34.5"	Mesquite	34.5'	4269	(MULTI)
5139	13"	Mesquite	13'	4270	
5140	26.5"	Mesquite	26.5'	4271	13.5X13X13
5141	9"	Mesquite	9'	4272	4.5X3.5X3.5X2
5142	10"	Mesquite	10'	4273	(MULTI)
5143	16.5"	Chinaberry	16.5'	4274	
5144	4"	Hackberry	4'	4275	
5145	4"	Hackberry	4'	4276	
5146	12.5"	Hackberry	12.5'	4277	9X5X2
5147	10.75"	Mesquite	10.75'	4278	6X5X2.5X1X1
5148	15.5"	Mesquite	15.5'	4279	10X6X5
5149	17"	Mesquite	17'	4280	
5150	3"	Ash	3'	4281	
5151	20"	Mesquite	20'	4282	(MULTI)
5152	35.5"	Mesquite	35.5'	4283	(MULTI)
5153	13.5"	Mesquite	13.5'	4284	6X5.5X5.5X4
5154	30"	Mesquite	30'	4285	12X11X9X6X6X4
5155	14.5"	Mesquite	14.5'	4288	8X7X3X3
5156	36"	Mesquite	36'	4289	(MULTI)
5157	4"	Hackberry	4'	4290	
5158	28.75"	Mesquite	28.75'	4291	(MULTI)
5159	42.25"	Mesquite	42.25'	4292	(MULTI)
5160	3"	Ash	3'	4293	
5161	18"	Sycamore	18'	4485	

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR. LOCATED ±162 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

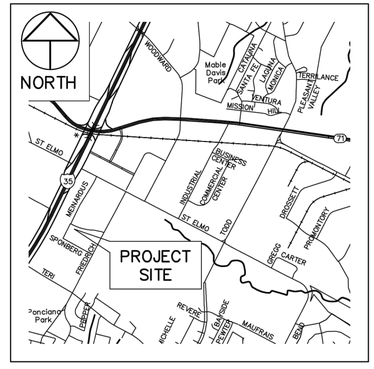
(GRID) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±95 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING.

(GRID) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

PROJECT CONTROL FOR ST. ELMO SERVICE CENTER PROJECT:

1	(GRID) N: 10048885.94	E: 3112010.33	ELEVATION: 651.33	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
2	(GRID) N: 10048938.60	E: 3111625.91	ELEVATION: 651.25	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
3	(GRID) N: 10049061.79	E: 3111271.27	ELEVATION: 651.10	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
4	(GRID) N: 10048855.46	E: 3111221.93	ELEVATION: 650.13	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
5	(GRID) N: 10048731.21	E: 3111195.43	ELEVATION: 648.80	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
6	(GRID) N: 10048718.14	E: 3111300.01	ELEVATION: 651.05	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
7	(GRID) N: 10048645.89	E: 3111232.28	ELEVATION: 649.27	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
8	(GRID) N: 10048872.99	E: 3111252.91	ELEVATION: 652.16	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
9	(GRID) N: 10048798.01	E: 3111236.59	ELEVATION: 651.30	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
10	(GRID) N: 10048914.90	E: 3111296.42	ELEVATION: 652.25	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
11	(GRID) N: 10048787.00	E: 3112004.75	ELEVATION: 651.22	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
12	(GRID) N: 10048619.24	E: 3111913.07	ELEVATION: 649.10	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
13	(GRID) N: 10048672.59	E: 3111764.35	ELEVATION: 650.53	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
14	(GRID) N: 10048736.06	E: 3111687.36	ELEVATION: 650.24	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
15	(GRID) N: 10048821.58	E: 3111496.43	ELEVATION: 651.46	MAG NAIL SET
16	(GRID) N: 10048685.74	E: 3111430.44	ELEVATION: 651.42	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
17	(GRID) N: 10048664.56	E: 3111519.21	ELEVATION: 648.88	1/2" IRON ROD SET WITH CAP STAMPED "MCGRAY MCGRAY"
23	(GRID) N: 10048960.41	E: 3111415.84	ELEVATION: 651.29	60D NAIL SET
24	(GRID) N: 10048907.16	E: 3111333.87	ELEVATION: 651.79	MAG NAIL SET



VICINITY MAP
NOT–TO–SCALE

FLOOD PLAIN NOTE:
(FOR INSURANCE PURPOSES ONLY: NOT FOR CONSTRUCTION, PERMITTING, OR OTHER USES; AN ENGINEER MUST BE CONSULTED FOR THE ACTUAL LOCATION OF THE FLOOD PLAIN): NO PORTION OF THIS LOT IS WITHIN AN IDENTIFIED (SHADED) SPECIAL FLOOD HAZARD AREA, INCLUDING THE 100–YEAR FLOOD, BUT IS WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 500–YEAR FLOOD–PLAIN, AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP FOR TRAVIS COUNTY, TEXAS, AND INCORPORATED AREAS, MAP NO. 48453C0585H DATED SEPTEMBER 26, 2008.

THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, THE ABOVE STATEMENT DOES NOT REPRESENT THIS SURVEYOR'S OPINION OF THE PROBABILITY OF FLOODING. REGISTERED PROFESSIONAL LAND SURVEYORS IN TEXAS ARE NOT LICENSED TO DETERMINE FLOOD AREAS.

NOTES:
1. ALL COORDINATES SHOWN HEREON ARE GRID COORDINATES AND IN U.S. SURVEY FEET.

2. THIS PROJECT IS REFERENCED, FOR ALL BEARING AND COORDINATE BASIS, TO THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE (4203), NORTH AMERICAN DATUM OF 1983 (2011) EPOCH 2010.00.

3. THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND WOULD BE SUBJECT TO ANY AND ALL EASEMENTS, CONDITIONS OR RESTRICTIONS THAT A CURRENT TITLE COMMITMENT MAY DISCLOSE.

THIS TOPOGRAHIC SURVEY WAS PERFORMED UNDER MY SUPERVISION AND DOES NOT REPRESENT A BOUNDARY SURVEY. APPROXIMATE RIGHT–OF–WAY AND PROPERTY LINES SHOWN.

STATE OF TEXAS REGISTERED CHRIS CONRAD 5623 LICENSED LAND SURVEYOR

09/21/2020
CHRIS CONRAD, REG. PROF. LAND SURVEYOR NO. 5623 DATE

TCAD# 04–1301–05–01 ISSUED: 09/21/2020

PARTIAL TREE AND TOPOGRAPHIC SURVEY
OUT OF THE SANTIAGO DEL VALLE GRANT, ABSTRACT NO. 24
CITY OF AUSTIN, TRAVIS COUNTY, TEXAS

McGRAY & McGRAY LAND SURVEYORS, INC.
3301 HANCOCK DRIVE #6
AUSTIN, TEXAS 78731
MCGRAY.COM (512) 451–8591
TBPELS SURVEY FIRM #10095500

SCALE:	1" = 20'	AUSTIN GRID#	H–17
DATE:	09/21/2020	TECH:	K. GREENWOOD
PROJECT:	20–103	FIELD:	SEPTEMBER 2020
FIELD BOOK:	2020/01	SHEET:	1 OF 3

M:\Bowman–20–103–St Elmo Service Ctr\Dwg\Planimetrics\20–103–St Elmo Service Center–Planimetrics.dwg

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR, LOCATED ±162 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

(GRID) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±85 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SER
VICE BUILDING.

(GRID) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

Key Notes:

1. EXISTING TREE REMAIN AND PROTECT IN PLACE
2. EXISTING TREE TO BE REMOVED
3. EXISTING PARKING/PAVEMENT STRIPES TO BE REMOVED
4. DEMOLITION AREA
5. EXISTING CURB TO REMAIN PROTECT IN PLACE
6. EXISTING CHAIN LINK FENCE
7. EXISTING CHAIN LINK FENCE TO BE REMOVED
8. EXISTING DUMPSTER TO BE REMOVED AND RELOCATED (NOT USED)
9. EXISTING CONCRETE PAD TO BE REMOVED (NOT USED)
10. EXISTING WATER METER TO REMAIN PROTECT IN PLACE (NOT USED)
11. EXISTING POLE TO BE REMOVED (NOT USED)
12. EXISTING CURB TO BE REMOVED
13. EXISTING DROP INLET TO REMAIN
14. EXISTING CHAIN LINK GATE TO BE REMOVED AND REINSTALLED (NOT USED)
15. EXISTING CHAIN LINK GATE TO REMAIN (NOT USED)
16. EXISTING CONCRETE BLOCKS TO REMAIN (NOT USED)

Construction Notes:

1. ALL EXISTING UTILITY COVERS WITHIN THE NEW PROPOSED ROADWAY SHALL BE ADJUSTED TO MEET PROPOSED GRADE IN THAT AREA

Legend:

- EXISTING BUILDING
- EXISTING FRONT OF CURB
- EXISTING CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE TO BE REMOVED
- PROPOSED CURB
- OVERHEAD UTILITY LINE
- TREE W/ APPROXIMATE DRIPLINE SHOWN
- BENCHMARK CONTROL POINT
- CONTROL POINT
- UTILITY POLE
- GUY WIRE
- LIGHT POLE
- ELECTRIC TRANSFORMER
- ELECTRIC JUNCTION BOX
- NATURAL GAS VALVE
- GAS METER
- TELEPHONE JUNCTION BOX
- DROP INLET
- CLEAN OUT
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- IRRIGATION CONTROL VALVE
- SIGN
- WOOD POST
- AIR CONDITIONER UNIT
- GUARD POST
- CULVERT PIPE (AS NOTED)
- ELECTRIC MANHOLE
- STORMWATER MANHOLE
- WASTEWATER MANHOLE

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN

MARTINEZ ENGINEERING
TBPE Firm Registration No. F-16723

CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

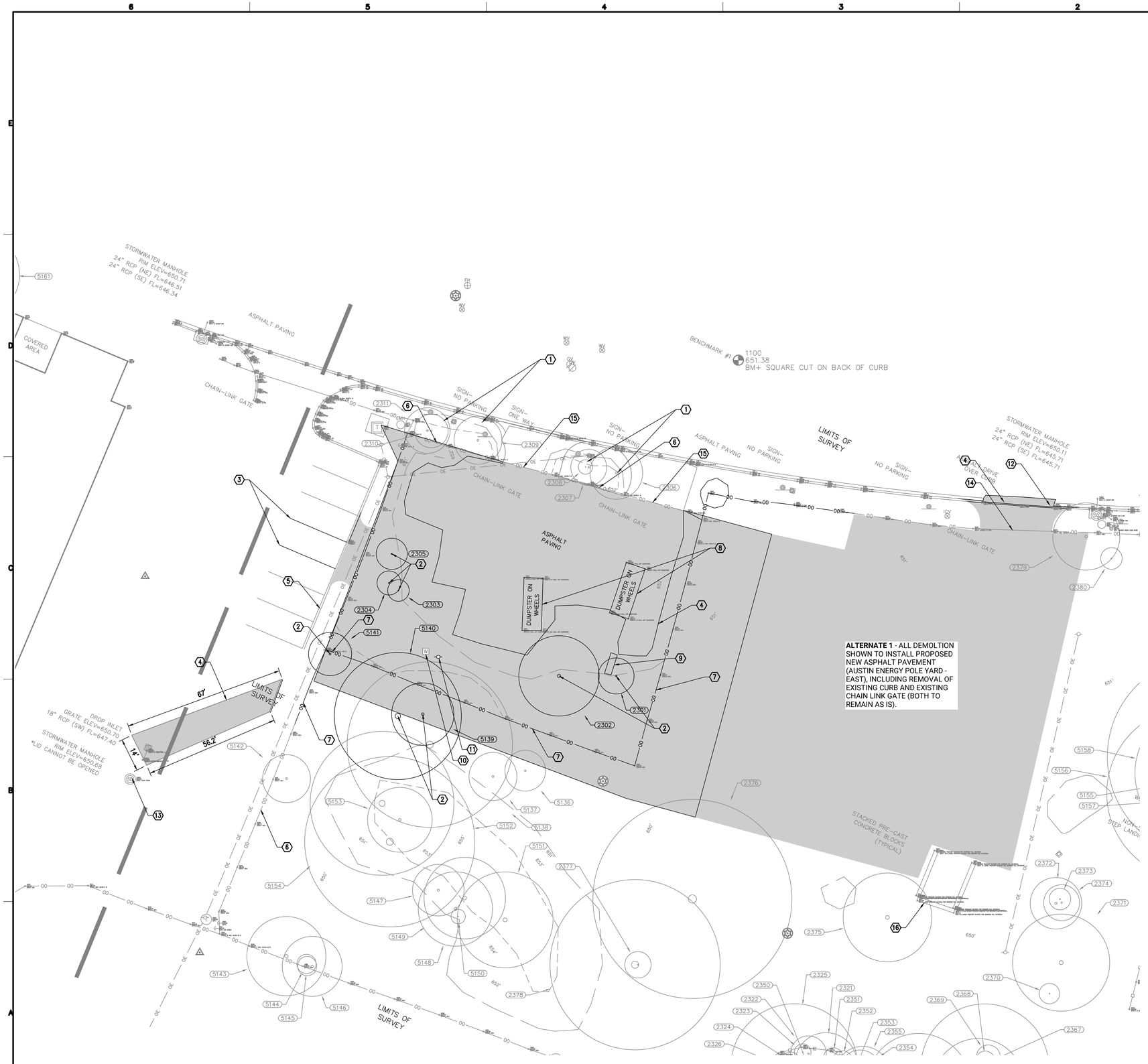
STATE OF TEXAS
ALFRED J. HAJKA
129815
LICENSED
PROFESSIONAL ENGINEER

TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
DEMOLITION PLAN – WEST

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.:
C100



20 0 20 40

SCALE: 1"=20'

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

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(GRID) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

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VICE BUILDING.

(GRID) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

Key Notes:

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2. EXISTING TREE TO BE REMOVED
3. EXISTING PARKING/PAVEMENT STRIPES TO BE REMOVED
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5. EXISTING CURB TO REMAIN PROTECT IN PLACE
6. EXISTING CHAIN LINK FENCE
7. EXISTING CHAIN LINK FENCE TO BE REMOVED
8. EXISTING DUMPSTER TO BE REMOVED AND RELOCATED
9. EXISTING CONCRETE PAD TO BE REMOVED
10. EXISTING WATER METER TO REMAIN PROTECT IN PLACE
11. EXISTING POLE TO BE REMOVED
12. EXISTING CURB TO BE REMOVED
13. EXISTING DROP INLET TO REMAIN
14. EXISTING CHAIN LINK GATE TO BE REMOVED AND REINSTALLED
15. EXISTING CHAIN LINK GATE TO REMAIN
16. EXISTING CONCRETE BLOCKS TO REMAIN

Construction Notes:

1. ALL EXISTING UTILITY COVERS WITHIN THE NEW PROPOSED ROADWAY SHALL BE ADJUSTED TO MEET PROPOSED GRADE IN THAT AREA

Legend:

- EXISTING BUILDING
- EXISTING FRONT OF CURB
- EXISTING CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE TO BE REMOVED
- PROPOSED CURB
- OVERHEAD UTILITY LINE
- TREE W/ APPROXIMATE DRIPLINE SHOWN
- BENCHMARK CONTROL POINT
- CONTROL POINT
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- TELEPHONE JUNCTION BOX
- DROP INLET
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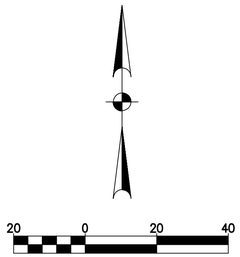
129815
LICENSED
PROFESSIONAL ENGINEER

TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
DEMOLITION PLAN – EAST

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: C101



20 0 20 40

SCALE: 1"=20'

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR, LOCATED ±182 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

(GRD) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±95 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SER
VICE BUILDING.

(GRD) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

Key Notes:

1. PROPOSED RELOCATED UTILITY POLE (NOT USED)
2. EXISTING PARKING/PAVEMENT STRIPES
3. PROPOSED CURBS REFER (4/C500)
4. EXISTING TREE
5. EXISTING CURB
6. PROPOSED CONCRETE PAVEMENT REFER (9/C501) (NOT USED)
7. PROPOSED ASPHALT PAVEMENT REFER (6/C500)
8. EXISTING CHAIN-LINK FENCE
9. PROPOSED PARKING/PAVEMENT STRIPES (8/C500) (9/C500)
10. PROPOSED CHAIN-LINK FENCE (6/C501)
11. EXISTING WATER METER
12. HANDICAP SIGNAGE (5/C501)
13. PROPOSED WHEEL STOP (10/C500)
14. CONCRETE DRIVEWAY (7/C500)
15. REINSTALL EXISTING ROLLING GATE
16. EXISTING ROLLING GATE
17. REF ARCH PLAN

Legend:

- EXISTING BUILDING
- EXISTING FRONT OF CURB
- EXISTING CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE TO BE REMOVED
- PROPOSED CURB
- OVERHEAD UTILITY LINE
- TREE W/ APPROXIMATE DRIPLINE SHOWN
- BENCHMARK CONTROL POINT
- CONTROL POINT
- UTILITY POLE
- GUY WIRE
- LIGHT POLE
- ELECTRIC TRANSFORMER
- ELECTRIC JUNCTION BOX
- NATURAL GAS VALVE
- GAS METER
- TELEPHONE JUNCTION BOX
- DROP INLET
- CLEAN OUT
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- IRRIGATION CONTROL VALVE
- SIGN
- WOOD POST
- AIR CONDITIONER UNIT
- GUARD POST
- CULVERT PIPE (AS NOTED)
- ELECTRIC MANHOLE
- STORMWATER MANHOLE
- WASTEWATER MANHOLE

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Tel: 512.477.9417

CITY OF AUSTIN
FOUNDED 1839

MARTINEZ ENGINEERING
TBPE Firm Registration No. F-16723

CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

STATE OF TEXAS
ALFRED J. HAJKA
129815
LICENSED PROFESSIONAL ENGINEER

TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME: LAYOUT – WEST

DATE: 04/06/2021

REVIEWED BY: AJH

PROJECT NO.: 202001400

SHEET NO.: C200

20 0 20 40

SCALE: 1"=20'

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR, LOCATED ±182 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

(GRID) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±95 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SER
VICE BUILDING.

(GRID) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

Key Notes:

1. PROPOSED RELOCATED UTILITY POLE
2. EXISTING PARKING/PAVEMENT STRIPES (NOT USED)
3. PROPOSED CURBS REFER 4/C500
4. EXISTING TREE
5. EXISTING CURB
6. PROPOSED CONCRETE PAVEMENT REFER 9/C501
7. PROPOSED ASPHALT PAVEMENT REFER 6/C500
8. EXISTING CHAIN-LINK FENCE
9. PROPOSED PARKING/PAVEMENT STRIPES 8/C500 9/C500
10. PROPOSED CHAIN-LINK FENCE 6/C501
11. EXISTING WATER METER
12. HANDICAP SIGNAGE 5/C501 (NOT USED)
13. PROPOSED WHEEL STOP 10/C500 (NOT USED)
14. CONCRETE DRIVEWAY 7/C500
15. REINSTALL EXISTING ROLLING GATE
16. EXISTING ROLLING GATE
17. REF ARCH PLAN (NOT USED)

Legend:

- EXISTING BUILDING
- EXISTING FRONT OF CURB
- EXISTING CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE TO BE REMOVED
- PROPOSED CURB
- OVERHEAD UTILITY LINE
- TREE W/ APPROXIMATE DRIPLINE SHOWN
- BENCHMARK CONTROL POINT
- CONTROL POINT
- UTILITY POLE
- GUY WIRE
- LIGHT POLE
- ELECTRIC TRANSFORMER
- ELECTRIC JUNCTION BOX
- NATURAL GAS VALVE
- GAS METER
- TELEPHONE JUNCTION BOX
- DROP INLET
- CLEAN OUT
- FIRE HYDRANT
- WATER VALVE
- WATER METER
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- SIGN
- WOOD POST
- AIR CONDITIONER UNIT
- GUARD POST
- CULVERT PIPE (AS NOTED)
- ELECTRIC MANHOLE
- STORMWATER MANHOLE
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CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

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ALFRED J. HAJKA
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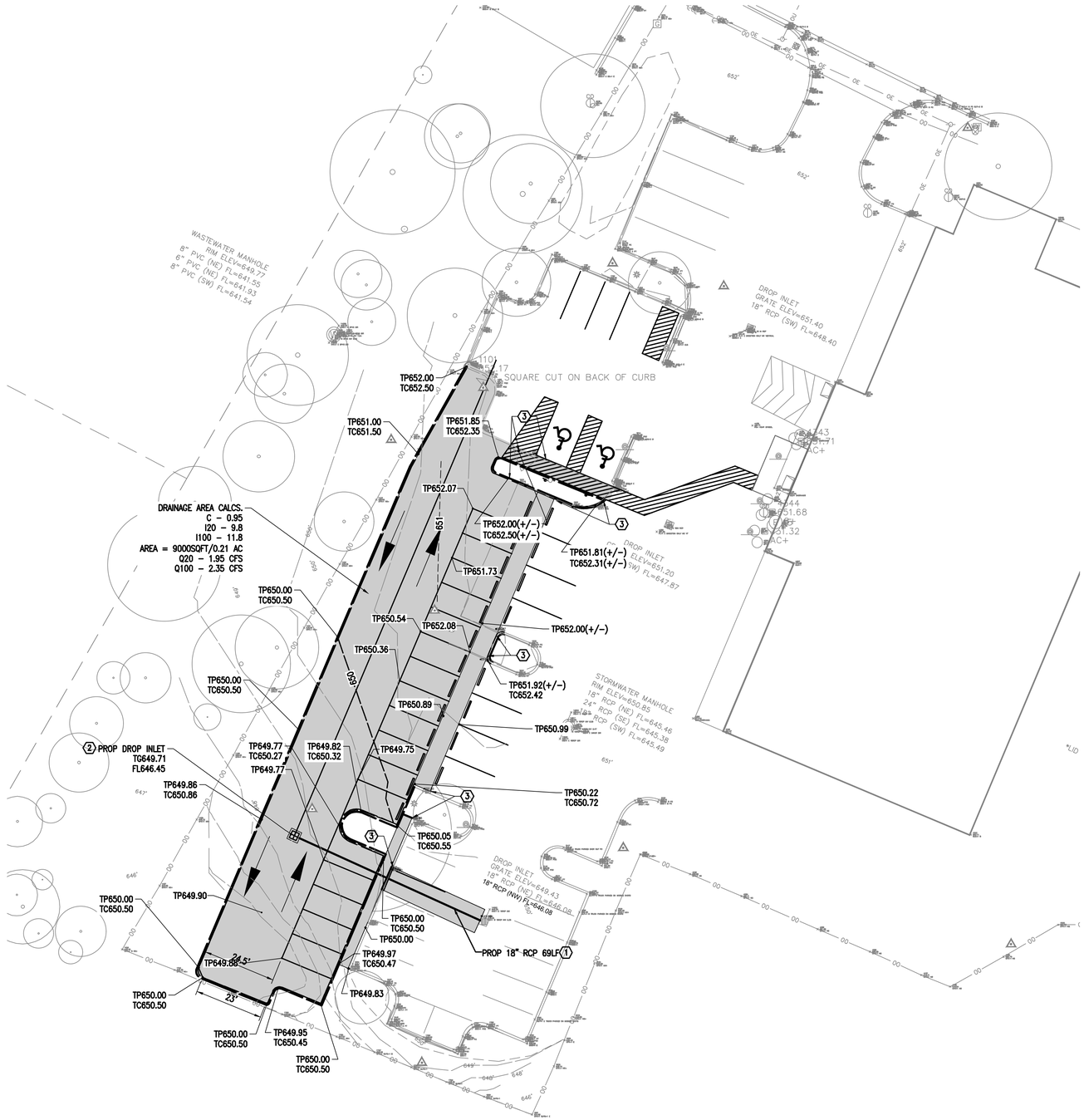
PROFESSIONAL ENGINEER

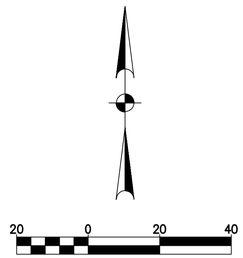
TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
LAYOUT – EAST

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: C201





SCALE: 1"=20'

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR, LOCATED ±182 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

(GRD) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±95 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SER
VICE BUILDING.

(GRD) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

Key Notes:

1. PROPOSED 18" RCP STORM PIPE
2. PROPOSED DROP INLET (1/2501)
3. MATCH EXISTING GRADES

Legend:

- EXISTING BUILDING
- EXISTING FRONT OF CURB
- EXISTING CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE TO BE REMOVED
- PROPOSED CURB
- OVERHEAD UTILITY LINE
- TREE W/ APPROXIMATE DRIPLINE SHOWN
- BENCHMARK CONTROL POINT
- CONTROL POINT
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- TELEPHONE JUNCTION BOX
- DROP INLET
- CLEAN OUT
- FIRE HYDRANT
- WATER VALVE
- WATER METER
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- SIGN
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STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER

TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
GRADING PLAN – WEST

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: C300

20 0 20 40

SCALE: 1"=20'

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR, LOCATED ±182 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

(GRD) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±85 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SER
VICE BUILDING.

(GRD) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

Key Notes:

1. PROPOSED 18' RCP STORM PIPE
2. PROPOSED DROP INLET (1/C501)
3. MATCH EXISTING GRADES

Legend:

- EXISTING BUILDING
- EXISTING FRONT OF CURB
- EXISTING CHAIN LINK FENCE
- EXISTING CHAIN LINK FENCE TO BE REMOVED
- PROPOSED CURB
- OVERHEAD UTILITY LINE
- TREE W/ APPROXIMATE DRIPLINE SHOWN
- BENCHMARK CONTROL POINT
- CONTROL POINT
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- NATURAL GAS VALVE
- GAS METER
- TELEPHONE JUNCTION BOX
- DROP INLET
- CLEAN OUT
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- IRRIGATION CONTROL VALVE
- SIGN
- WOOD POST
- AIR CONDITIONER UNIT
- GUARD POST
- CULVERT PIPE (AS NOTED)
- ELECTRIC MANHOLE
- STORMWATER MANHOLE
- WASTEWATER MANHOLE

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CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

STATE OF TEXAS
ALFRED J. HAJKA
129815
LICENSED
PROFESSIONAL ENGINEER

TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME: GRADING PLAN – EAST

DATE: 04/06/2021

REVIEWED BY: AJH

PROJECT NO.: 202001400

SHEET NO.: C301

20 0 20 40

SCALE: 1"=20'

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR. LOCATED ±182 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

(GRID) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±95 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SER
VICE BUILDING.

(GRID) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

LEGEND

- IPB — INLET PROTECTION BARRIER
- RFB — REINFORCED FILTER FABRIC BARRIER
- SC — STABILIZED CONSTRUCTION EXIT
- CW — CONSTRUCTION WASHOUT
- MULCH SOCK

NOTES

1. ALL AFFECTED INLETS SHALL BE PROTECTED BEFORE CONSTRUCTION ACTIVITIES BEGIN.
2. SEDIMENT AND EROSION CONTROLS INCLUDING NON-STORMWATER DISCHARGES SHALL BE AS PER THE SPECIFICATIONS.
3. CONTRACTOR TO DETERMINE CONCRETE WASHOUT AND STABILIZED CONSTRUCTION EXIT/ENTRANCE

EROSION CONTROL NOTES

1. THIS PROJECT IS SUBJECT TO ENVIRONMENTAL PROTECTION AGENCY (EPA) TEXAS POLLUTION DISCHARGE ELIMINATIONAL SYSTEM (TPDES) CONSTRUCTION STORM WATER DISCHARGE REGULATIONS AND REQUIREMENTS. THE CONTRACTOR WILL BE REQUIRED TO EXECUTE A NOTICE OF INTENT AND IMPLEMENT THE POLLUTION PREVENTION PLAN INCLUDED IN THE CONTRACT DOCUMENTS AND COMPLY WITH ALL REPORTING AND INSPECTION REQUIREMENTS SET FORTH IN THE NPDES REGULATIONS.
2. REINFORCED SILT FENCES AND INLET PROTECTION TO BE PROVIDED DURING CONSTRUCTION OF THIS PROJECT, AND REMOVED UPON CONSTRUCTION COMPLETION (SEE SPECS. AND DETAILS).
3. CONTRACTOR TO PROVIDE STABILIZED CONSTRUCTION EXIT PER DETAIL AT ALL POINTS OF EGRESS DURING CONSTRUCTION.
4. PRIOR TO REMOVAL OF EROSION CONTROL DEVICES, ALL AREAS DISTURBED ARE TO BE HYDRO-MULCH SEEDED.

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CITY OF AUSTIN
FOUNDED 1839

MARTINEZ ENGINEERING
TBPE Firm Registration No. F-16723

CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

STATE OF TEXAS
ALFRED J. HAJKA
129815
Licensed
PROFESSIONAL ENGINEER

TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
EROSION CONTROL PLAN – WEST

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: C400

20 0 20 40

SCALE: 1"=20'

PROJECT BENCHMARK FOR ST. ELMO SERVICE CENTER:

BM #1– SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE NORTH SIDE OF SPONBERG DR. LOCATED ±162 FEET NORTHWEST OF A WASTEWATER MANHOLE ON THE SOUTH SIDE OF SPONBERG DR., AND ±77 FEET NORTHEAST OF A NO PARKING SIGN ON THE SOUTH SIDE OF SPONBERG DR.

(GRID) N:10,048,911.68 E: 3,111,743.83 ELEVATION = 651.38'

BM #2–SQUARE CUT IN CONCRETE ON THE BACK OF THE CURB ON THE WEST SIDE OF THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING LOCATED ±95 FEET SOUTHWEST OF A STORMWATER DROP INLET LOCATED IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING, AND ±85 FEET NORTHWEST OF A STORMWATER DROP INLET IN THE PARKING LOT ON THE WEST SIDE OF THE MAIN SERVICE BUILDING.

(GRID) N:10,048,879.54 E: 3,111,248.46 ELEVATION = 652.17'

LEGEND

- IPB — INLET PROTECTION BARRIER
- RFB — REINFORCED FILTER FABRIC BARRIER
- SC — STABILIZED CONSTRUCTION EXIT
- CW — CONSTRUCTION WASHOUT
- MULCH SOCK

NOTES

1. ALL AFFECTED INLETS SHALL BE PROTECTED BEFORE CONSTRUCTION ACTIVITIES BEGIN.
2. SEDIMENT AND EROSION CONTROLS INCLUDING NON-STORMWATER DISCHARGES SHALL BE AS PER THE SPECIFICATIONS.
3. CONTRACTOR TO DETERMINE CONCRETE WASHOUT AND STABILIZED CONSTRUCTION EXIT/ENTRANCE

EROSION CONTROL NOTES

1. THIS PROJECT IS SUBJECT TO ENVIRONMENTAL PROTECTION AGENCY (EPA) TEXAS POLLUTION DISCHARGE ELIMINATIONAL SYSTEM (TPDES) CONSTRUCTION STORM WATER DISCHARGE REGULATIONS AND REQUIREMENTS. THE CONTRACTOR WILL BE REQUIRED TO EXECUTE A NOTICE OF INTENT AND IMPLEMENT THE POLLUTION PREVENTION PLAN INCLUDED IN THE CONTRACT DOCUMENTS AND COMPLY WITH ALL REPORTING AND INSPECTION REQUIREMENTS SET FORTH IN THE NPDES REGULATIONS.
2. REINFORCED SILT FENCES AND INLET PROTECTION TO BE PROVIDED DURING CONSTRUCTION OF THIS PROJECT, AND REMOVED UPON CONSTRUCTION COMPLETION (SEE SPECS. AND DETAILS).
3. CONTRACTOR TO PROVIDE STABILIZED CONSTRUCTION EXIT PER DETAIL AT ALL POINTS OF EGRESS DURING CONSTRUCTION.
4. PRIOR TO REMOVAL OF EROSION CONTROL DEVICES, ALL AREAS DISTURBED ARE TO BE HYDRO-MULCH SEEDED.

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CITY OF AUSTIN
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CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

STATE OF TEXAS
ALFRED J. HAJKA
129815
LICENSED
PROFESSIONAL ENGINEER

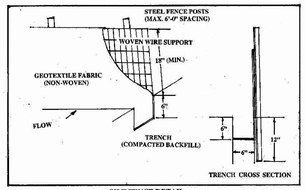
TBPE Firm Registration No. F-16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
EROSION CONTROL PLAN – EAST

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: C401

EXHIBIT "D"
Silt Fence Detail

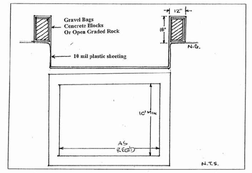


SILT FENCE DETAIL

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 12"
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF THE FLOW. WHERE FENCE CAN NOT BE TRENCHED INTO THE SURFACE (e. g. PAVEMENT) THE FABRIC SHALL BE WEIGHTED DOWN WITH ROCK OR 1" X 4" LUMBER SECURELY FASTENED TO THE SURFACE, ON THE UPSTREAM SIDE TO PREVENT FLOW UNDER THE FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 6" WIDE TO ALLOW FOR THE FILTER FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. THE FILTER FABRIC SHALL BE SECURELY FASTENED TO THE WOVEN WIRE BACKING, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POST.
5. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6". THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTRATION.
6. INSPECTION SHALL BE MADE WEEKLY AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY, IF NEEDED.
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED.

1

EXHIBIT "G"
Concrete truck washout

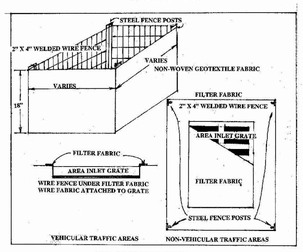


Alternative Self-installed Construction Site Concrete Truck Washout

1. The excavation for the concrete truck washout shall be a minimum of 10' wide and of sufficient length and depth to accommodate 7 gallons of washout water and concrete per truck per day and/or 50 gallons of washout water and concrete per pump truck per day.
2. In the event that the self-installed concrete truck washout is constructed above ground, it shall be 10' wide and 10' long with the same requirements for containment as described in item 1.
3. The containment area shall be lined with 10 mil plastic sheeting, without holes or tears. Where there are seams, these shall be secured according to manufacturers directions.
4. The plastic sheeting shall be of sufficient size so that it will overlap the top of the containment area and be wrapped around the gravel bags, concrete blocks or open graded rock at least 2 times.
5. The gravel bags or concrete blocks shall be placed abutting each other to form a continuous berm around the outer perimeter of the containment area.
6. The berm consisting of gravel bags, concrete blocks or open graded rock shall be no less than 18" high and no less than 12" wide.
7. The containment area shall not exceed 50% of capacity at any one time.
8. Solids shall be removed from containment area and disposed of properly and any damage to the plastic sheeting shall be repaired or sheeting replaced before next use.

2

EXHIBIT "A"
Area Inlet Detail



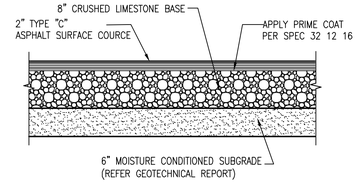
AREA INLET PROTECTION

1. STEEL POSTS THAT SUPPORT THE SILT FENCE SHALL BE INSTALLED AT EACH CORNER AND IN BETWEEN CORNERS IF THE DISTANCE IS GREATER THAN 6' BETWEEN CORNER POSTS.
2. USE SILT FENCE DETAIL FOR INSTALLATION OF THE SILT FENCE AROUND THE AREA INLET.
3. THE METAL AREA INLET GRATE SHALL BE LIFTED AND FILTER FABRIC WRAPPED AROUND THE GRATE AND THE GRATE SHALL BE REPLACED.
4. IN VEHICULAR TRAFFIC AREAS THE METAL GRATE SHALL BE LIFTED OUT AND WIRE FENCE MATERIAL SHALL BE PLACED UNDER IT WITH FILTER FABRIC PLACED BETWEEN THE GRATE AND THE WIRE FENCE. THE WIRE FENCE SHALL THEN BE ATTACHED TO THE GRATE.
5. ACCUMULATED SILT SHALL BE REMOVED WHEN THE FILTER FABRIC OVER THE GRATE COMPLETELY COVERS THE GRATE AREA, AND THE SILT AROUND THE SILT FENCE REACHES A HEIGHT OF 6"
6. AREA INLET PROTECTION SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED.

3

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		REINFORCED CURB AND GUTTER SECTION	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10*	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-2
	ADOPTED		

4

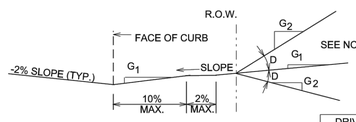


5 STREET CURB AND GUTTER
NOT TO SCALE

NOTES:
1. JOINTS TO ALIGN WITH ADJACENT PAVEMENT JOINTS WHERE APPLICABLE.
2. CONTROL JOINTS TO BE SPACED AT 10' TO 15' SPACING.
3. EXPANSION JOINTS TO BE SPACED NOT GREATER THAN 80' AND SHALL BE LOCATED AT ENDS OF ALL RADII.

6 H.M.A.C. PAVEMENT
NOT TO SCALE

USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS



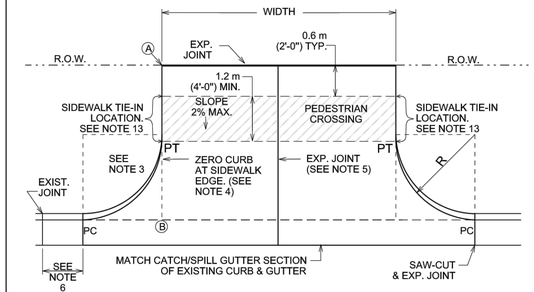
ALLOWABLE GRADES

DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE	
	STD.	MAX
>1500	0%	3%
500-1500	3%	6%
< 500	6%	15%

NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET); WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE FIRE DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND "G2 IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALT BOARD OR OTHER APPROVED MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

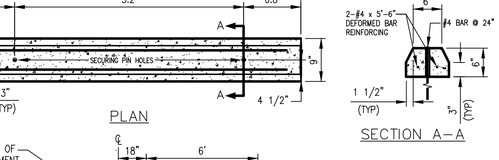
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPE II DRIVEWAY	
RECORD COPY SIGNED BY CUONG TRAN	*02/24/10*	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 2 OF 2
	ADOPTED		

7



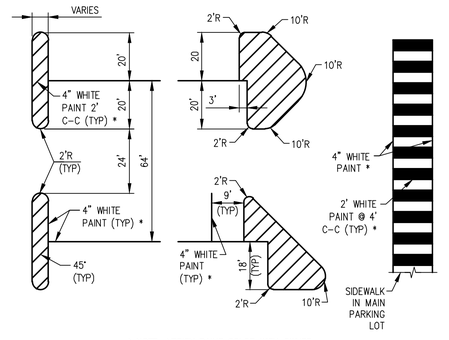
PLAN

NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT (A) ABOVE POINT (B) IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (¼" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).



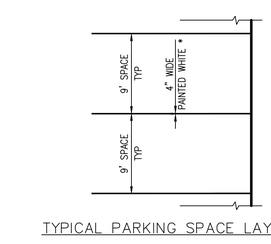
CROSS SECTION

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPE II DRIVEWAY	
RECORD COPY SIGNED BY CUONG TRAN	*02/24/10*	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 1 OF 2
	ADOPTED		

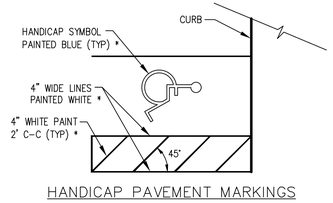


* NOTE: VERIFY PAINT COLOR WITH OWNER.

9 TYPICAL PAINT STRIPING
NOT TO SCALE



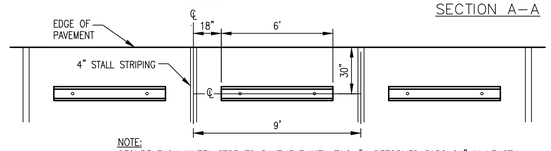
TYPICAL PARKING SPACE LAYOUT



HANDICAP PAVEMENT MARKINGS

* NOTE: VERIFY PAINT COLOR WITH OWNER.

8 TYPICAL PAVEMENT MARKINGS
NOT TO SCALE



NOTE:
SECURE EACH WHEEL STOP TO PAVEMENT WITH TWO #4 DEFORMED BARS 24" IN LENGTH.

PLACEMENT

10 CONCRETE WHEEL STOPS
NOT TO SCALE

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN
ST. ELMO SERVICE CENTER
RENOVATION

MARTINEZ ENGINEERING
TBPE Firm Registration No. F–16723

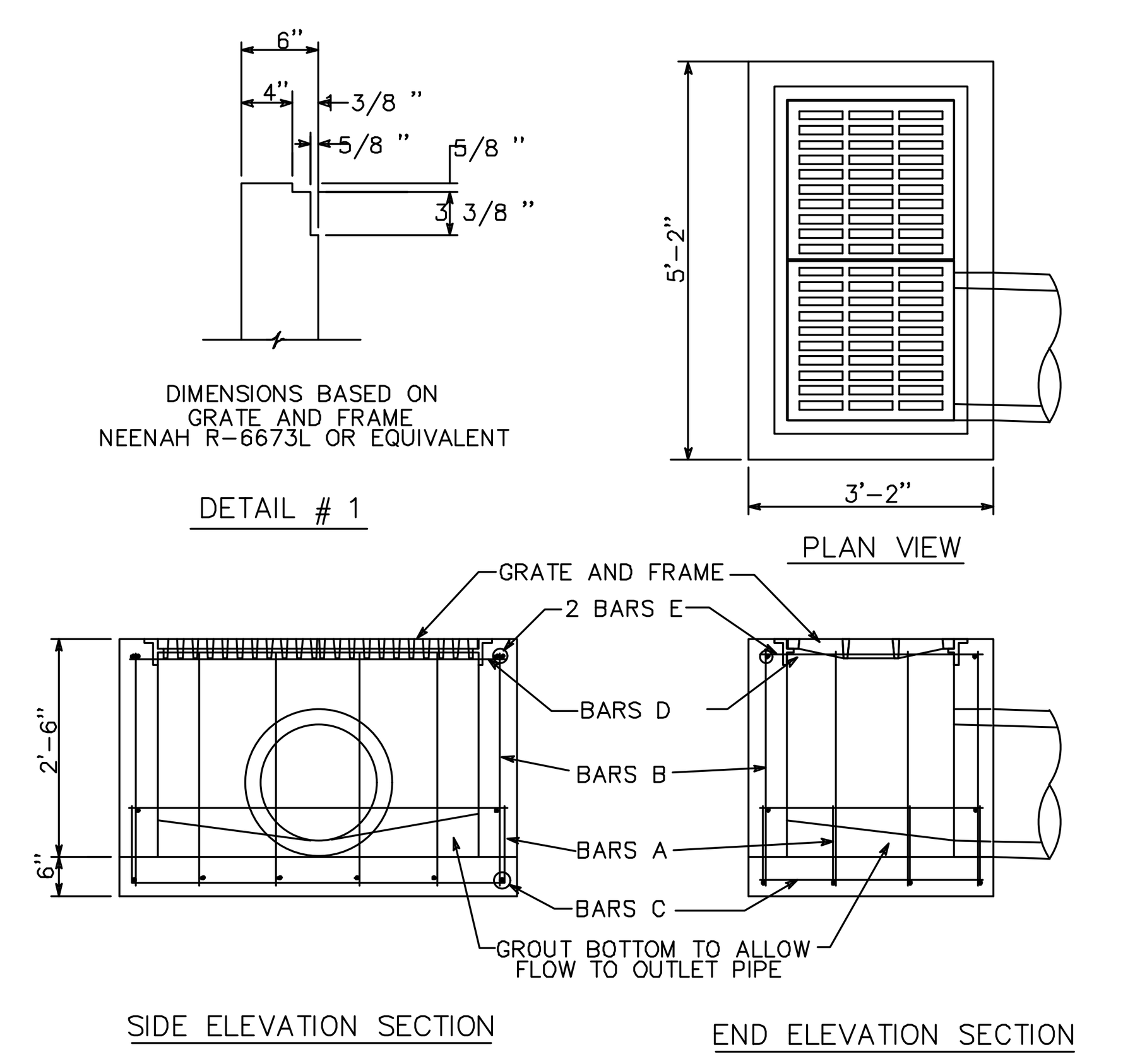
STATE OF TEXAS
ALFRED J. HAJKA
129815
LICENSED
PROFESSIONAL ENGINEER

TBPE Firm Registration No. F–16723
2021.04.06

NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME:
DETAILS

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: C500



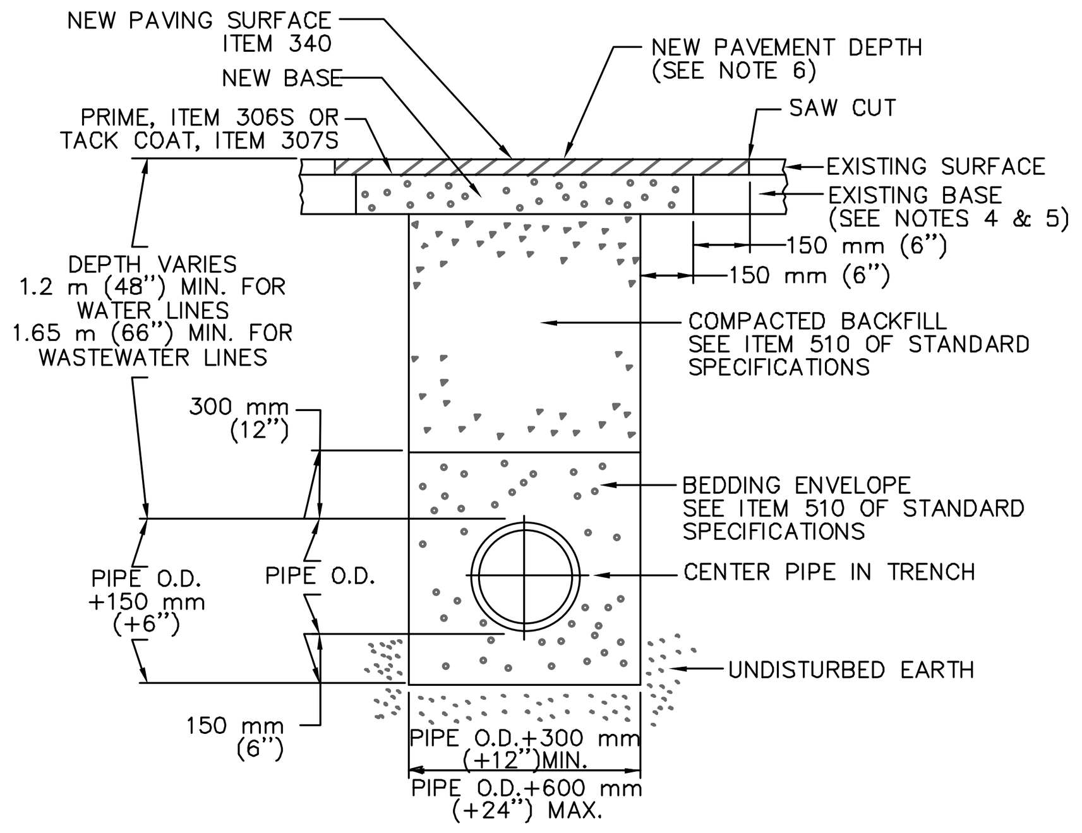
REV. DATE:11-27-96 | DESCRIPTION: STANDARD MANUAL

REINFORCING STEEL SCHEDULE					
BAR	QTY	SIZE	SPACING	LENGTH	WEIGHT
A	4	4	12"	6'-8"	18
B	16	4	12"	3'-0"	32
C	8	4	12"	2'-10"	15
D	4	4	12"	5'-2"	14
E	4	5	12"	2'-10"	12
TOTAL WEIGHT---91 LB.					

CITY OF AUSTIN
DRAINAGE UTILITY
STANDARD DROP INLET
RECORD COPY SIGNED BY ALLEN BRECHER — APPROVED
5/24/88 — DATE
ADOPTED: 04-01-88
SCALE: N.T.S.
INITIAL: B.H.
STANDARD NO. 508-11

1

THIS DETAIL FOR USE ONLY ON CITY OF AUSTIN C.I.P. PROJECTS.

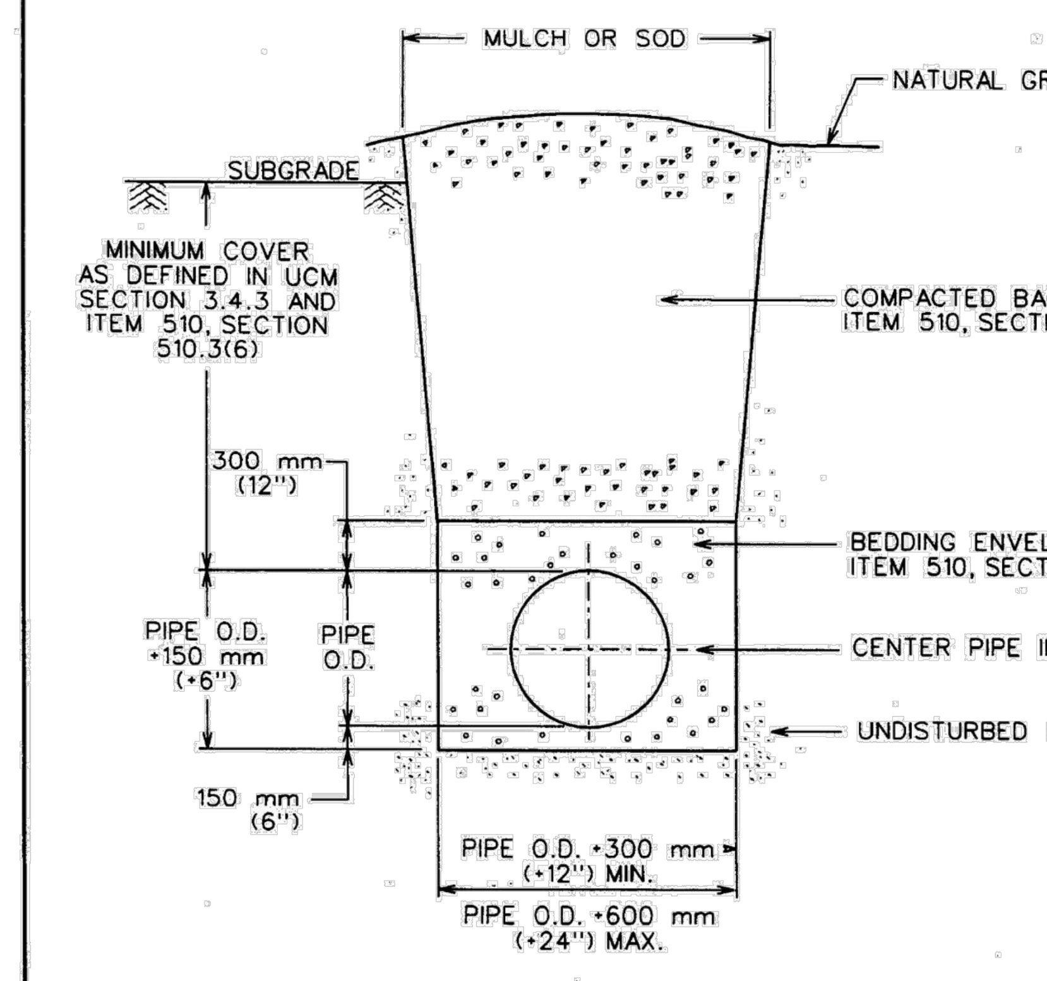


NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

CITY OF AUSTIN
WATER AND WASTEWATER UTILITY
TYPICAL TRENCH WITH PAVED SURFACE
RECORD COPY SIGNED BY KATHI L. FLOWERS *8/19/02* ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 510S-3

2



REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510,
   SECTION 510.2(6), "SELECT BACKFILL OR BORROW";
   SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER";
   SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE
3/13/06 ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 510S-5

3

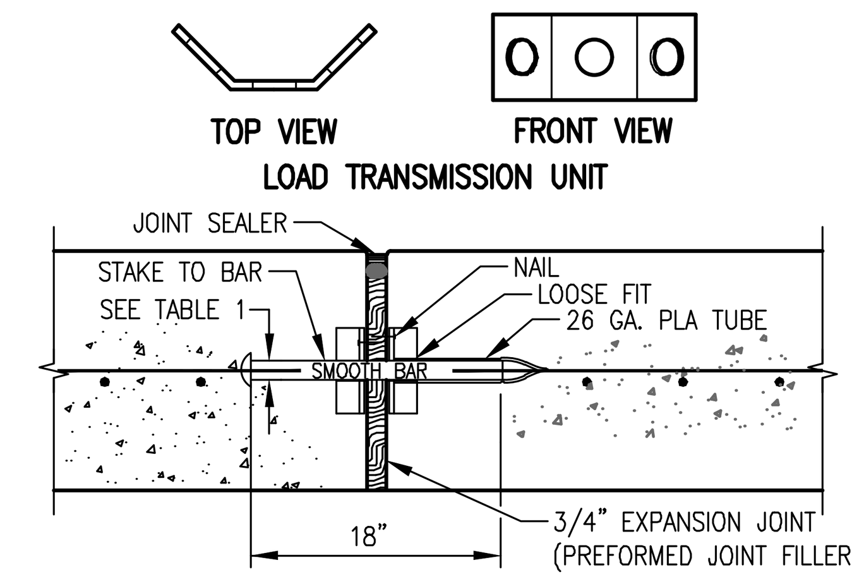
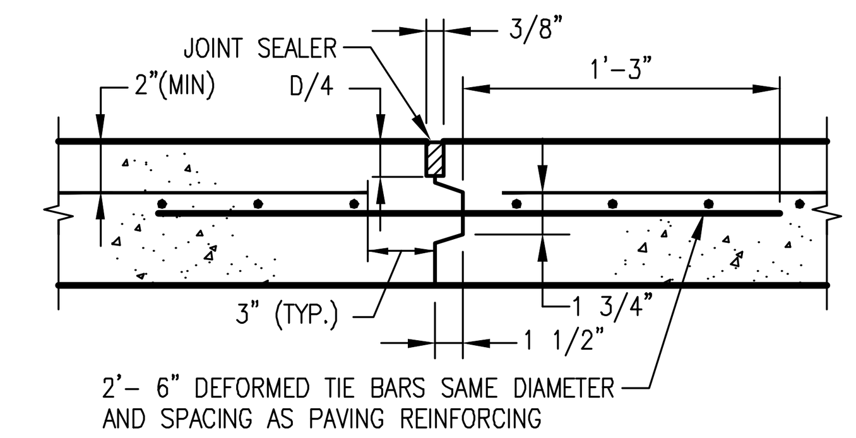


TABLE 1

PAVEMENT THICKNESS (IN)	DIAMETER (IN)
6	3/4
7	1
8	1
9-12	1 1/4

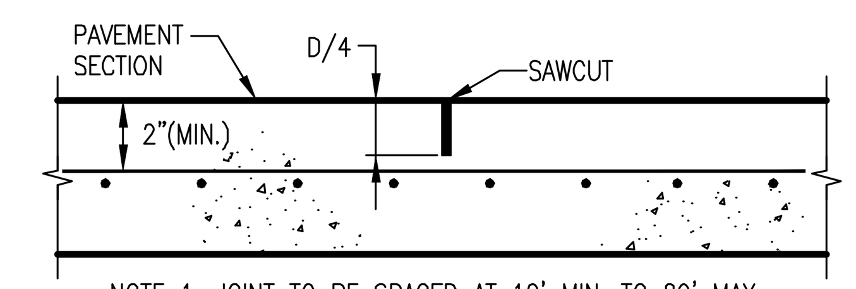
NOTES:
A. JOINT SPACING SHALL NOT BE GREATER THAN 80' AND SHALL BE LOCATED AT THE ENDS OF ALL RADII OF THE ROADWAY AND/OR CURB.
B. PLASTIC TUBE TO BE DOWEL DIAMETER PLUS 1/16".
C. CENTER DOWEL HORIZONTALLY ON JOINT.
D. STEEL TO MEET ASTM STD. SPECS FOR CONCRETE REINFOR. BAR UNITS SPACED 12" C-C.
E. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN 2" MIN COVER, AND TO NOT CONFLICT WITH PAVEMENT REINFORCEMENT.

PAVEMENT DOWEL EXPANSION JOINT (EJ)



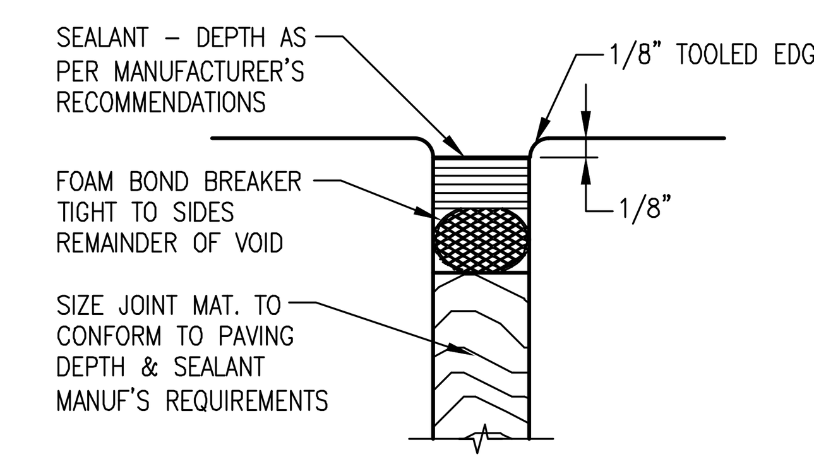
NOTE: TO BE LOCATED AT CENTERLINE OF ROADWAY (MIN. SPACING @ 10'; MAX. SPACING @ 20')

PAVEMENT LONGITUDINAL JOINT (LJ)



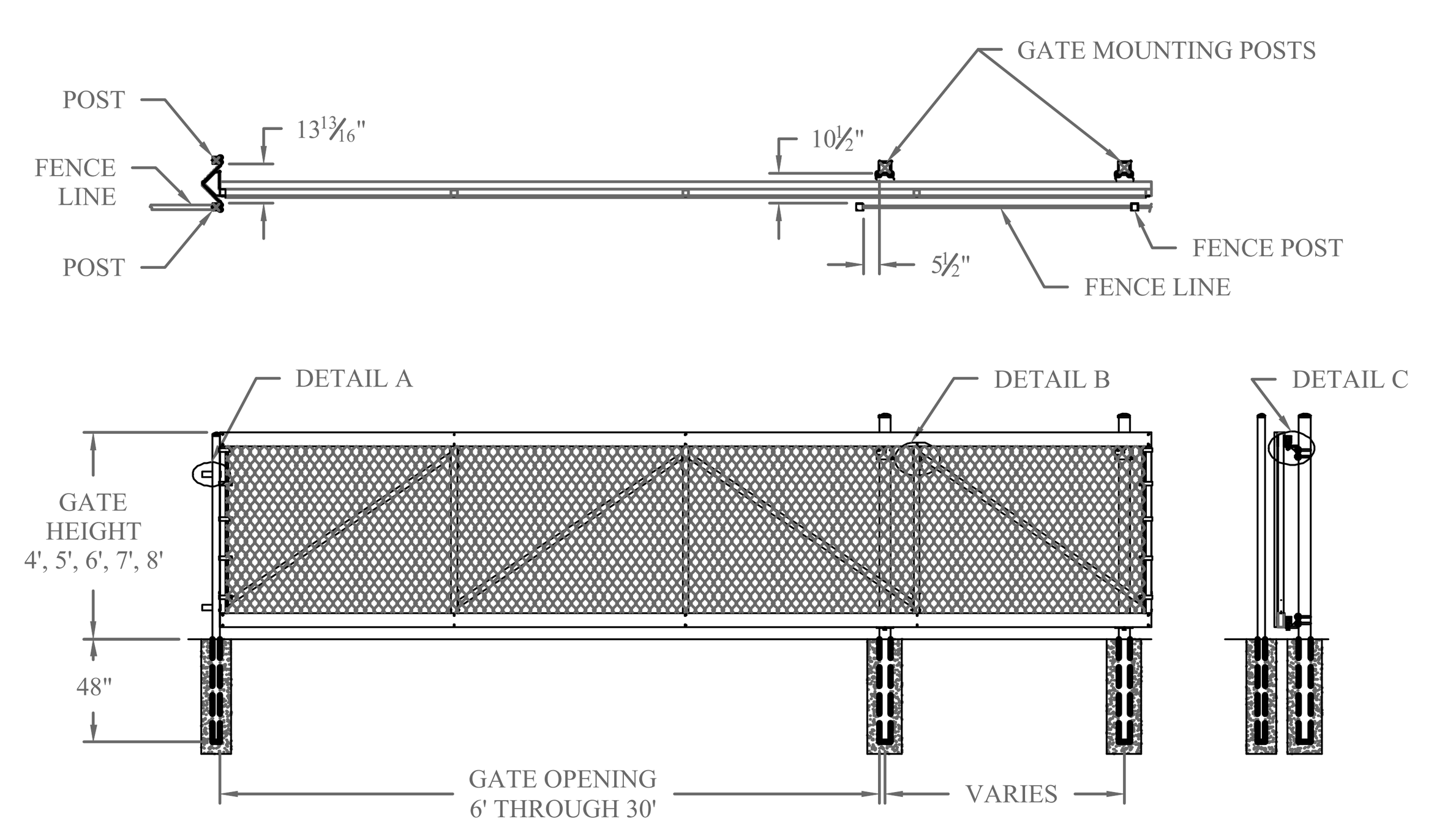
NOTE 1: JOINT TO BE SPACED AT 10' MIN. TO 20' MAX. BETWEEN DOWEL EXPANSION JOINTS. (VEHICULAR PAVEMENT)

CONTROL JOINT (CJ)

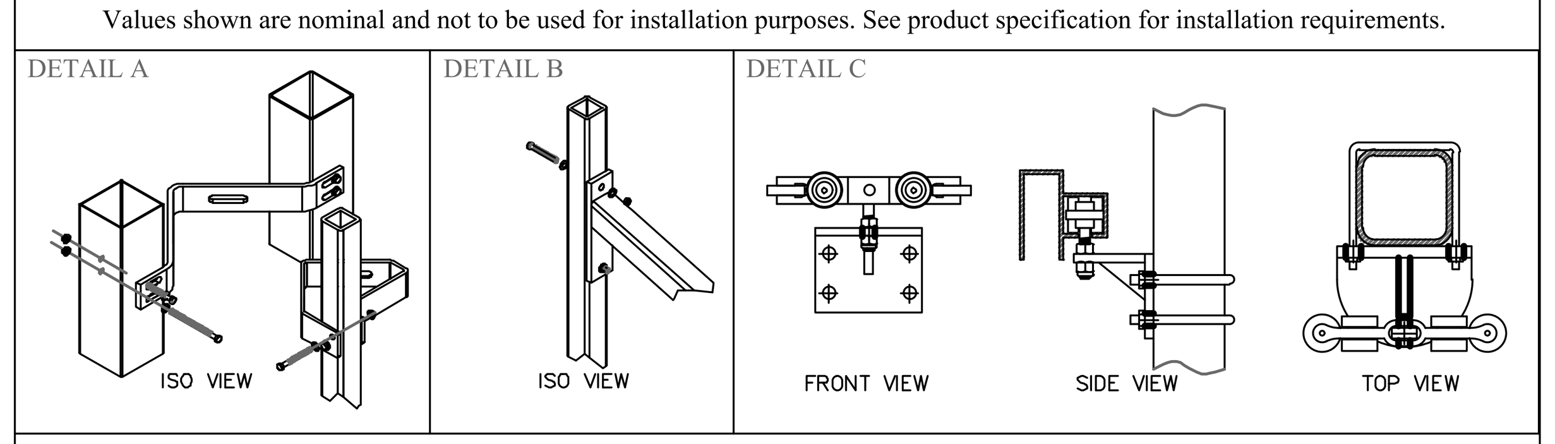


PAVING JOINT SEALANT

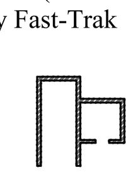
7 CONCRETE PAVEMENT JOINTS
NOT TO SCALE



Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.



CHAIN LINK CANTILEVER GATE SPECIFICATION SUMMARY
U.S.A. PATENT NO. 5,136,813
Material: Aluminum (ASTM B221 - 6005-T5)
Track: Proprietary Fast-Trak Extruded Shape



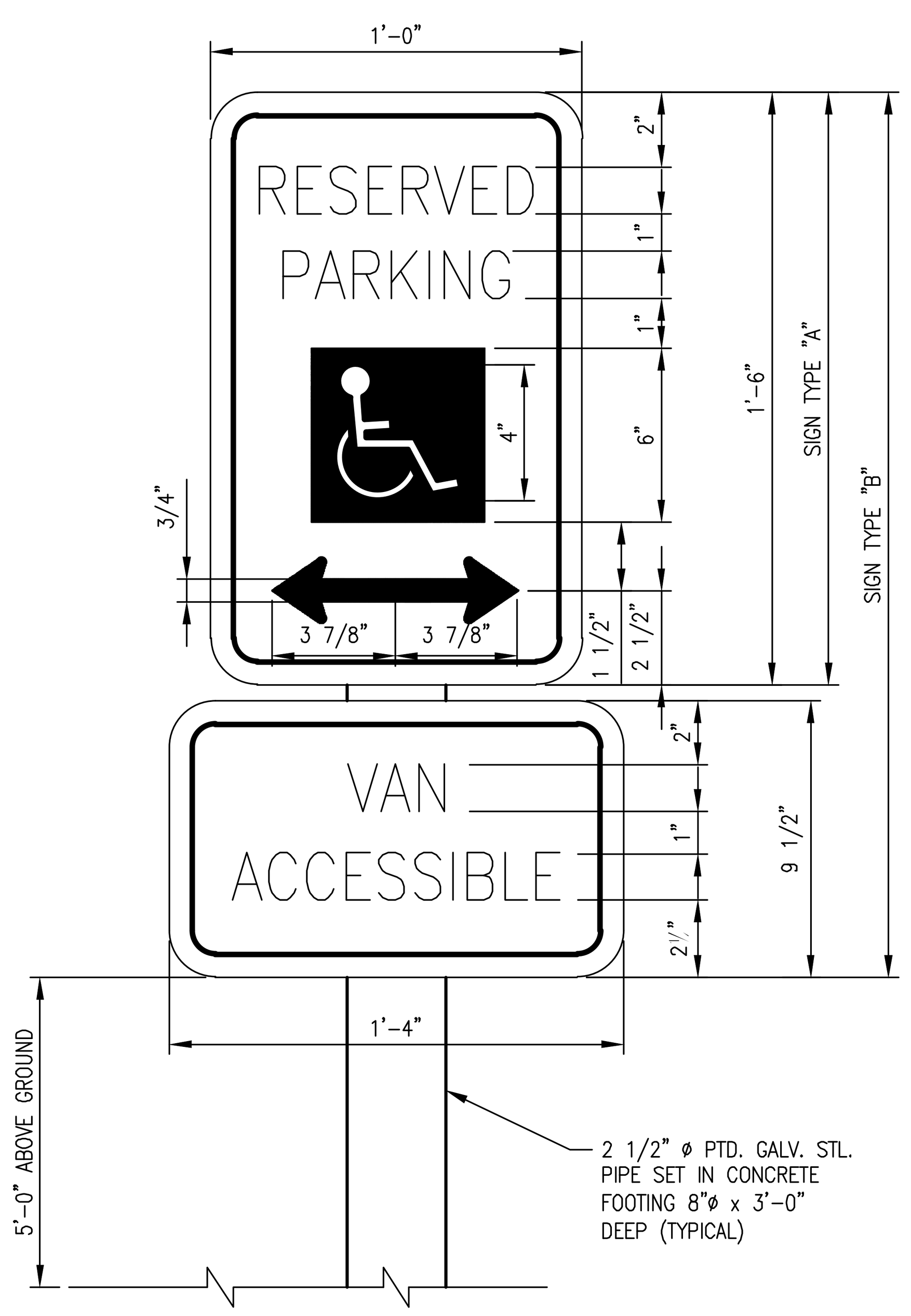
Uprights and Diagonal Braces: 2" Square x ¼"
Cantilever Gate Hardware: Kit # TGKCD
Ameristar's TransPort Ornamental Cantilever Gates are designed to be mounted on posts that are off-set from the fence line. By off-setting the gate posts, the gate will pass between the fence and the mounting posts, keeping it from falling in the event of a track or hardware failure (a requirement of ASTMF2200).

CTXISO

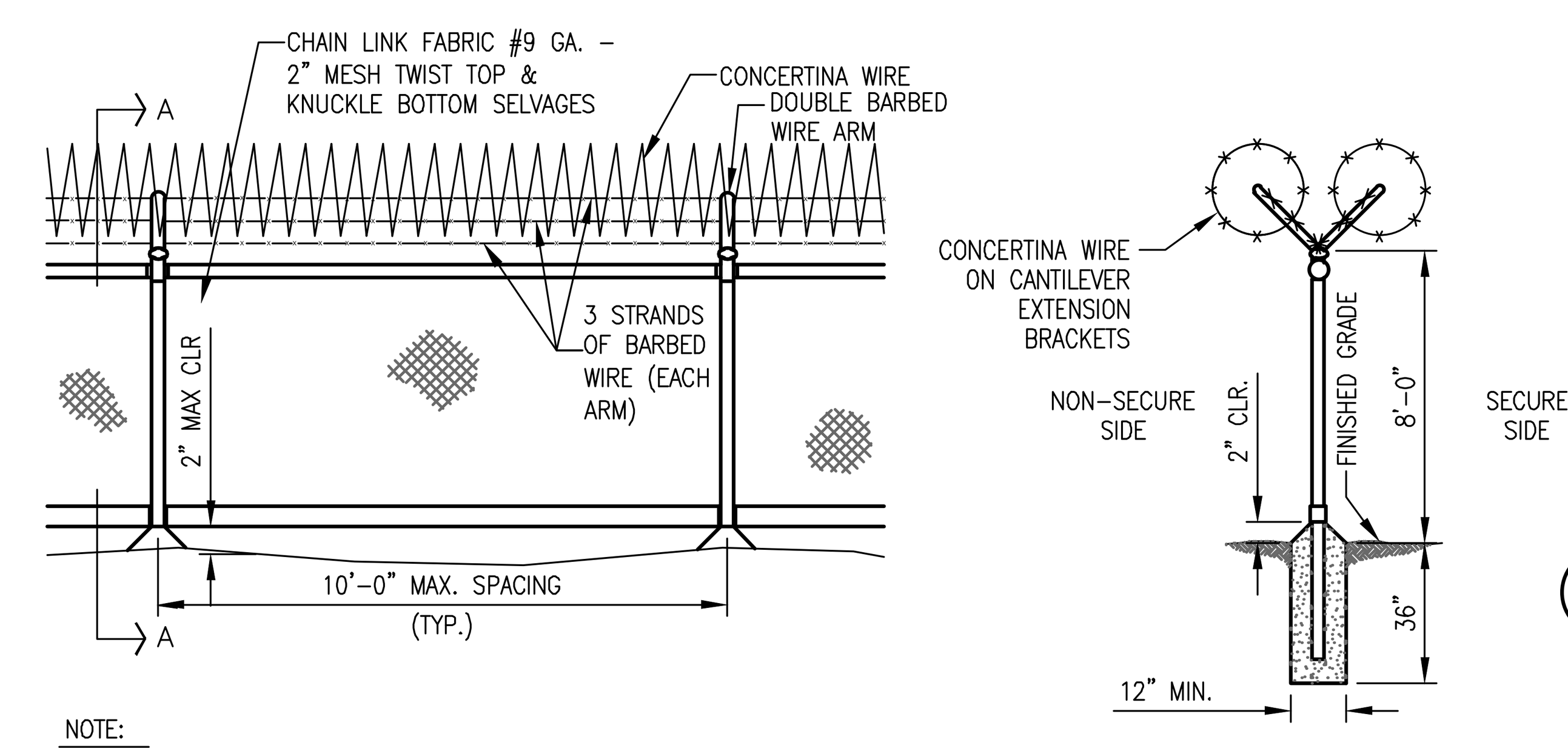
Title: TRANSPORT LINK CANTILEVER GATE		
DR: CI	SH . 1of 1	SCALE: DO NOT SCALE
CK: PB	Date 6/28/10	REV: b

AMERISTAR®
1555 N. Mingo
Tulsa, OK 74116
1-888-333-3422
www.ameristarfence.com

4



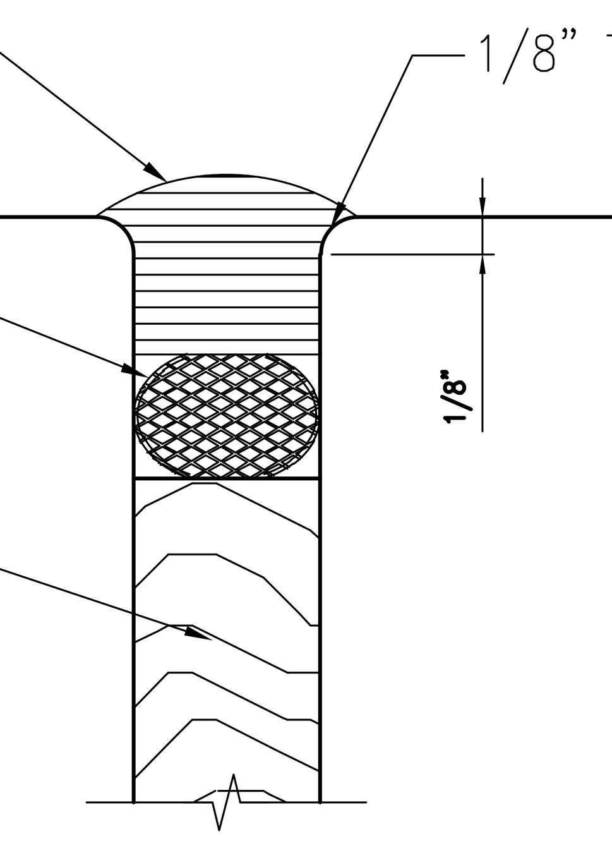
5 TYPICAL HANDICAP PARKING SIGN
NOT TO SCALE



SECTION A-A

NOTE:
1. FENCING TO FOLLOW GROUND LINE FOR SLIGHT CHANGES IN NATURAL GRADE.

6 8' IMPOUND LOT FENCE
NOT TO SCALE



8 PAVING JOINT SEALANT
NOT TO SCALE

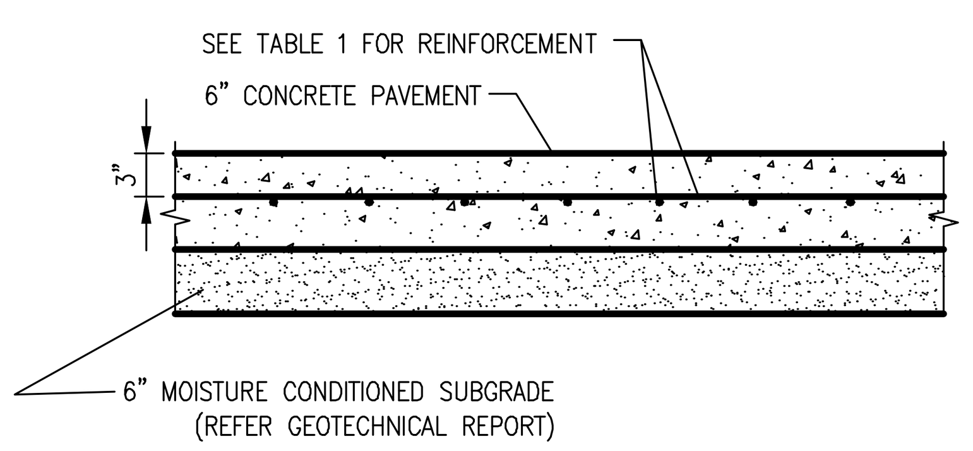


TABLE 1

PAVEMENT THICKNESS D (IN)	GR. 60 STEEL E/W	
	#5 BAR SPACING (IN)	#6 BAR SPACING (IN)
6	18	–
7	16	–
8	12	20
9	18	24

MINIMUM LAP LENGTHS (L)
A. #5 BARS; L = 30 INCHES
B. #6 BARS; L = 36 INCHES

9 6" CONCRETE PAVEMENT
NOT TO SCALE

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN · FOUNDED 1839

MARTINEZ ENGINEERING
TBPE Firm Registration No. F-16723

CITY OF AUSTIN ST. ELMO SERVICE CENTER RENOVATION

STATE OF TEXAS · ALFRED J. HAJKA · 129815 · LICENSED · PROFESSIONAL ENGINEER
TBPE Firm Registration No. F-16723
2021.04.06

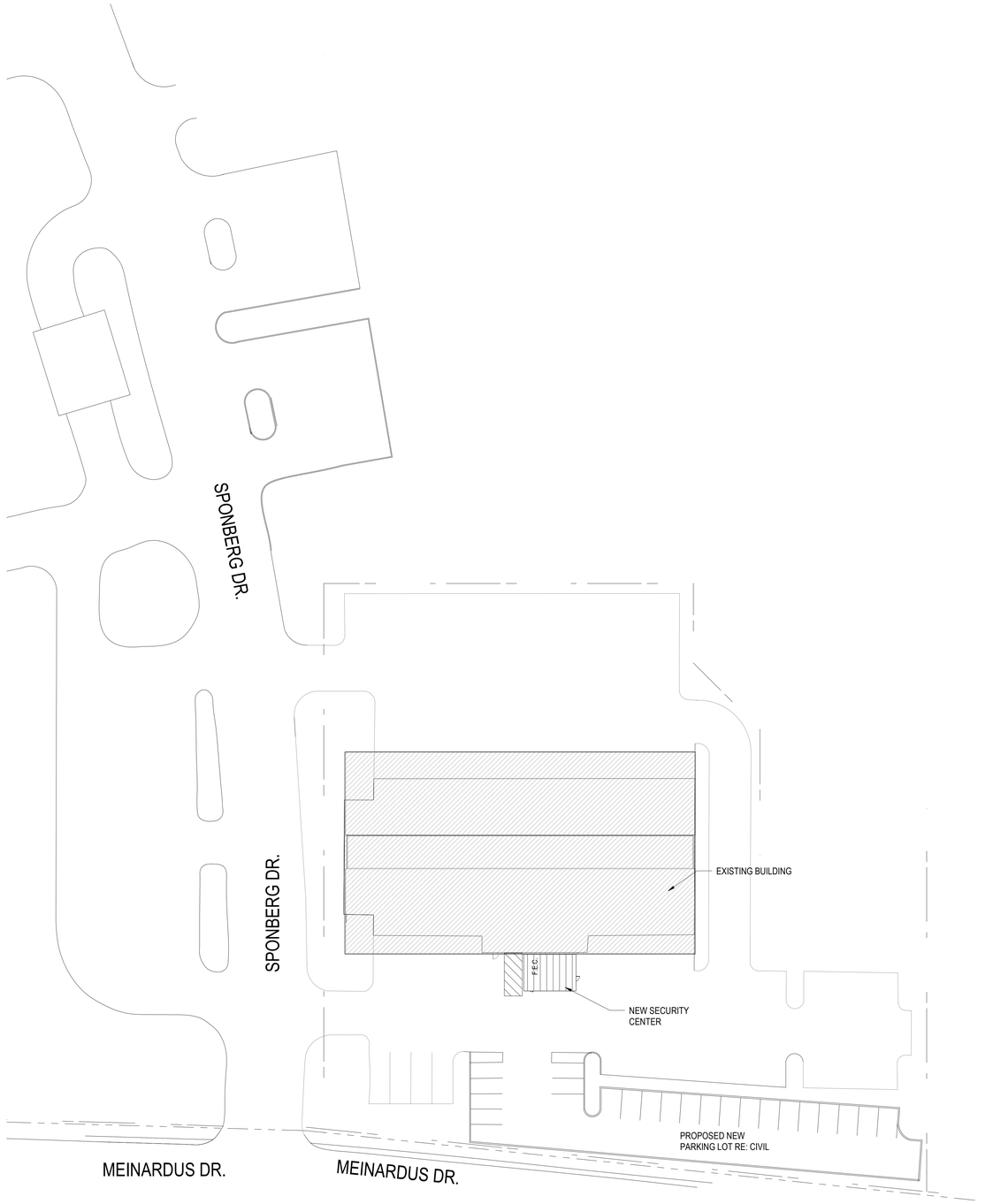
NO.	ISSUED	DATE
1	100% CD	04/06/2021

SHEET NAME: DETAILS

DATE: 04/06/2021
REVIEWED BY: AJH
PROJECT NO.: 202001400
SHEET NO.: C501

GENERAL NOTES - ARCHITECTURAL SITE PLAN

1 THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY. REFER TO CIVIL DRAWINGS FOR ALL INFORMATION REGARDING SITE IMPROVEMENT CONSTRUCTION & TO LANDSCAPE SERIES DRAWINGS FOR ALL INFORMATION REGARDING LANDSCAPE IMPROVEMENTS.



1 ARCHITECTURAL SITE PLAN
1" = 30'-0"

PLAN NORTH

TRUE NORTH

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN · FOUNDED 1839 ·

ST. ELMO SERVICE CENTER 8
RENOVATIONS

KEY PLAN

NO.	REVISION	DATE

REGISTERED ARCHITECT BONITA TRICE GRAY 23015 STATE OF TEXAS

04/08/2021

BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:

ARCHITECTURAL SITE PLAN

DATE: 04/08/2021

REVIEWED BY: GSC

PROJECT NO.: 202001400

SHEET NO.:

A01-02

A6 SECURE ENTRY DEMO PLAN
1/4" = 1'-0"

GENERAL NOTES - DEMOLITION

1 THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO THE EXISTING BUILDING AND GROUNDS RESULTING FROM DEMOLITION OPERATIONS.
2 DASHED LINES INDICATE EXISTING CONSTRUCTION TO BE REMOVED. REMOVE ALL CONSTRUCTION THAT CONFLICTS WITH THE DESIGN INTENT OF THE NEW CONSTRUCTION. NOTIFY ARCHITECT IF UNCLEAR.
3 NOTIFY ARCHITECT OF ALL M.E.P. ITEMS LOCATED IN PARTITIONS OR CEILINGS INDICATED FOR REMOVAL AND NOT DOCUMENTED ON DRAWINGS.
4 VERIFY LOCATIONS OF UTILITIES BELOW SLABS ON GRADE PRIOR TO EXCAVATING OR TRENCHING FOR NEW ULTILITIES. REPAIR OR REPLACE ALL UTILITIES DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION OPERATIONS.
5 REMOVAL OF DOORS ALSO INCLUDES REMOVAL OF DOOR FRAMES AND HARDWARE UNLESS SPECIFICALLY NOTED OTHERWISE.
6 RETURN ALL SALVAGED DOORS, FRAMES, HARDWARE, LIGHT FIXTURES AND EQUIPMENT NOT REUSED IN THIS PROJECT TO OWNER FOR REUSE ELSEWHERE, UNLESS NOTED OTHERWISE.
7 SALVAGE EXISTING CEILING TILE AND GRID FOR REUSE UNLESS NOTED OTHERWISE. CONFINE REUSED TILE TO USE IN AREAS DESIGNATED ON NEW CONSTRUCTION REFLECTED CEILING PLAN AND / OR ROOM FINISH SCHEDULE. REPLACE ALL SUSPENSION GRID MEMBERS DAMAGED DURING DEMOLITION OPERATIONS OR CUT MEMBERS LEFT EXPOSED BY DEMOLITION OPERATIONS, IN AREAS WHERE EXISTING CEILING IS TO REMAIN.
8 RELOCATION OF EXISTING DUCTWORK TO REMAIN IN ORDER TO AVOID CONFLICT WITH NEW CONSTRUCTION IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
9 RELOCATION OF EXISTING ELECTRICAL WORK TO REMAIN IN ORDER TO AVOID CONFLICT WITH NEW CONSTRUCTION IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
10 RELOCATION OF EXISTING PLUMBING WORK TO REMAIN IN ORDER TO AVOID CONFLICT WITH NEW CONSTRUCTION IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.
11 NOTIFY ARCHITECT OF ALL APPARENT DEFECTS IN EXISTING CONSTRUCTION PRIOR TO BEGINNING DEMOLITION OPERATIONS, AS WELL AS CONCEALED DEFECTS UNCOVERED DURING DEMOLITION OPERATIONS.
12 REMOVE ALL EXISTING DEBRIS, ABANDONED DUCT, WIRING AND CONDUIT FROM ABOVE CEILING AREAS THAT ARE TO REMAIN.
13 REMOVE ELECTRICAL BOXES, WIRING AND CONDUIT IN DEMOLISHED PARTITIONS BACK TO THEIR RESPECTIVE PANELS, UNLESS INDICATED TO BE REROUTED.
14 ELECTRICAL BOXES TO BE REMOVED FROM PARTITIONS TO REMAIN ARE INDICATED ON THE PLANS. REMOVE DEVICES AND REPAIR PARTITION, READY TO RECEIVE NEW FINISHES.
15 LIGHTING TO BE REMOVED AND / OR RELOCATED IS INDICATED ON THE REFLECTED CEILING PLAN, OR A SEPARATE CEILING DEMOLITION PLAN.

DEMOLITION PLAN AND FLOOR PLAN LEGEND

ROOM NAME
101
ROOM NAME
ROOM NUMBER

1
A101
SIM
DETAIL NO.
DRAWING NO.
DETAIL
NOTE: "SIM" INDICATES SIMILAR DETAIL

NOT IN SCOPE

EXISTING DOOR
DOOR TO BE REMOVED
101
NEW DOOR
DOOR NO.

1 KEYED NOTE
01 STOREFRONT
NEW WALLS
EXISTING WALLS
WALLS TO BE REMOVED
A6 PARTITION TYPE

10/A10-10
NOTE: "SIM" INDICATES SIMILAR DETAIL
"OH" INDICATES OPPOSITE HAND
ENLARGED PLAN OR DETAIL REFERENCE

DEMO PLAN KEYED NOTES

1 EXISTING WALL TO BE REPAIRED AFTER DEMO OF FIXED WINDOW.

PLAN NORTH
TRUE NORTH

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN FOUNDED 1839

ST. ELMO SERVICE CENTER 8
RENOVATIONS

KEY PLAN

NO.	REVISION	DATE

REGISTERED ARCHITECT BONITA TRICE GRAY STATE OF TEXAS
04/08/2021
BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:
FLOOR PLAN - LEVEL 1 - DEMO

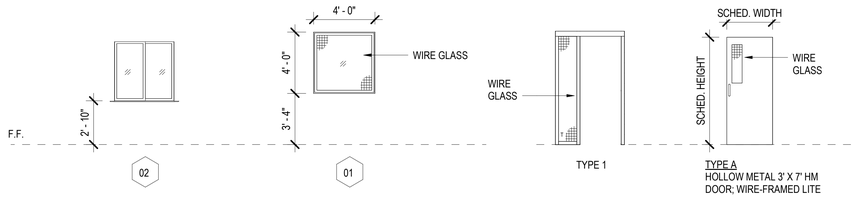
DATE: 04/08/2021
REVIEWED BY: Checker
PROJECT NO.: 202001400
SHEET NO.:
A03-01

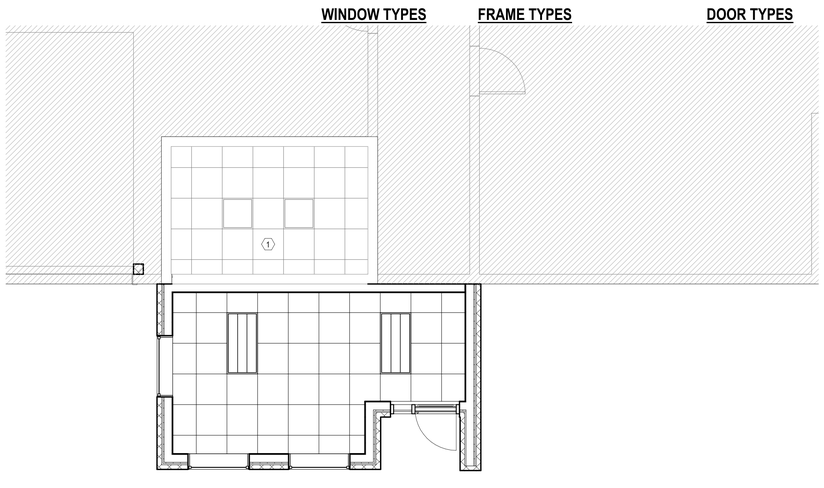
GSC - 202001400 ST. ELMO SERVICE CENTER 8 RENOVATIONS

C:\Users\SierraCruz\Documents\202001400 - CoA St.Elmos_v2019_SierraCruz.rvt
4/8/2021 11:07:20 PM

DOOR SCHEDULE

	DOOR						FRAME						
DOOR #	TYPE	WIDTH	HEIGHT	THK	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	GLAZ	FIRE RATING	HW SET	COMMENTS
100	A	3' - 0"	7' - 0"	1 3/4"	H.M. / GLASS	PT-4	1	HM	PT-4	1/4" TEMP.	-	715	DOOR AND FRAME: PT-4
101	EXIST	EXIST	EXIST	EXIST	EXIST	PT-4	EXIST	EXIST	EXIST	EXIST	-	E801	DOOR AND FRAME: PT-4

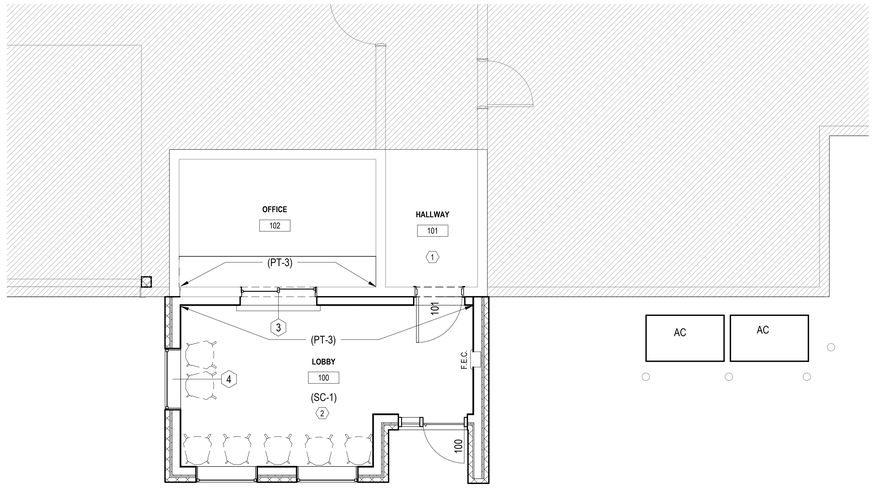




B4 LEVEL 1- RCP
1/4" = 1'-0"

LIST OF FINISHES

TAG	DESCRIPTION	MANUFACTURER	PATTERN / SERIES	COLOR	SIZE	FINISH	COMMENTS
CR-1	CHAIR RAIL	-	WOOD	PT-2	2" X 4"	EGGSHELL	LOBBY
PT-1	PAINT	SHERWIN WILLIAMS	-	MORNING FOG SW6255		EGGSHELL - WALLS	
PT-2	PAINT	SHERWIN WILLIAMS	-	DIGNITY BLUE SW6804		EGGSHELL - WALLS	
PT-3	PAINT	SHERWIN WILLIAMS	-	CYBERSPACE SW7076		SEMIGLOSS - DOORS AND FRAMES	DOORS AND FRAMES
SC-1	SEALED CONCRETE	-	-	-	-	SEALED	
ST-1	COUNTERTOP	CAMBRIA	NEWPORT			POLISHED & ROUNDED CORNERS	COUNTER TOP AND WINDOW SILLS
WB-1	WALL BASE	JOHNSONITE	JOHNSONITE	MOON ROCK	4"	-	TYP. AROUND FIELD



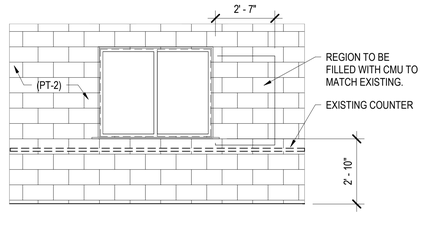
A6 LEVEL 1 - FINISH PLAN
1/4" = 1'-0"

GENERAL NOTES - R.C.P.

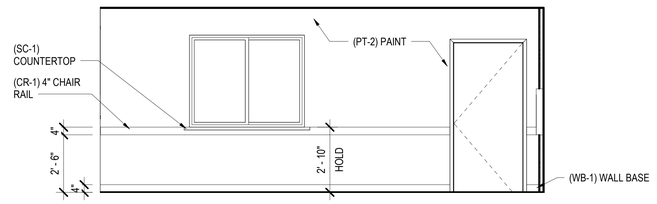
1 THESE NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS
2 REFER TO MEP DRAWINGS AND SPECIFICATIONS FOR DESIGN OF THESE SYSTEMS (DUCT SIZES, CIRCUITING, ETC).
3 VERIFY FIELD CONDITIONS AND LOCATIONS OF ALL PLUMBING, DUCTS, STRUCTURAL ELEMENTS, AND OTHER APPLICABLE ITEMS. ARRANGE AND MODIFY NON-VIABLE ITEMS TO ENSURE ADEQUATE CLEARANCE FOR CEILING LAY-OUT AS SHOWN.
4 FINAL SPRINKLER HEAD LOCATIONS SHALL BE SET BY ENGINEER AND COORDINATED WITH ARCHITECT. CENTER HEADS IN ACOUSTICAL TILE OR CEILING PANELS WHERE POSSIBLE U.N.O.
5 CEILING HEIGHT SHALL BE 9'-0" ABOVE FINISHED FLOOR, U.N.O.
6 REFER TO ELECTRICAL DRAWINGS FOR FIXTURE TYPE SCHEDULE.
7 REFER TO INTERIOR ELEVATIONS AND ROOM FINISH SCHEDULE FOR ADD'L INFORMATION CONCERNING CEILING HEIGHTS, CEILING MATL'S AND FURRED CEILINGS.
8 MEASURE EACH CEILING AREA AND ESTABLISH LAYOUT OF ACOUSTICAL UNITS AS SHOWN TO BALANCE BORDER WIDTHS AT OPPOSITE EDGES OF EACH CEILING.
9 ALL LIGHT SWITCHES SHALL BE LOCATED 48" TO CENTERLINE ABOVE FINISH FLOOR AND BE LOCATED 6" FROM STRIKE SIDE OF DOOR, U.N.O. COORDINATE WITH ELECTRICAL.
10 ALL THERMOSTATS SHALL BE LOCATED 48" TO CENTERLINE ABOVE FINISH FLOOR. WHEN LIGHT SWITCH AND THERMOSTATS OCCUR TOGETHER, INSTALL BOTH ALIGNED HORIZONTALLY AT CENTERLINE. COORDINATE WITH MECHANICAL.
11 QUANTITY AND APPROXIMATE LOCATION OF THERMOSTATS SHALL BE DETERMINED BY HVAC ENGINEER. LOCATIONS SHALL BE SUBMITTED TO ARCHITECT / DESIGNER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
12 KEYNOTES AND LEGENDS ARE TYPICAL FOR ALL RCP PLAN SHEETS, AND MAY NOT APPLY TO EACH SHEET.
13 SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DIFFUSERS, FIXTURES, EQUIPMENT, GRILLES, DUCTS, ETC. - TYPES AND SIZES.
14 CEILINGS AND OTHER SUSPENDED ITEMS SHALL BE ATTACHED TO STRUCTURE BY FULLY EMBEDDED OR "SHEAR" CONNECTION. PULL OUT CONNECTIONS ARE NOT ACCEPTABLE.
16 CEILING / SOFFIT HEIGHTS ARE NOTED ON REFLECTED CEILING PLANS. HEIGHTS ARE ABOVE FINISH FLOOR.
17 CENTER ALL DEVICES, SPRINKLER HEADS, ETC. IN CEILING TILES.
18 PROVIDE CONTINUOUS SOUND BATT INSULATION ABOVE ALL TOILET ROOM CEILINGS.
19 FIRE SPRINKLER CONTRACTOR SHALL REFERENCE ALL DRAWINGS AND SPECIFICATIONS FOR DETERMINING PROPER COVERAGE AND SPRINKLER HEAD LAYOUT / DESIGN.

GENERAL NOTES - FINISH PLAN

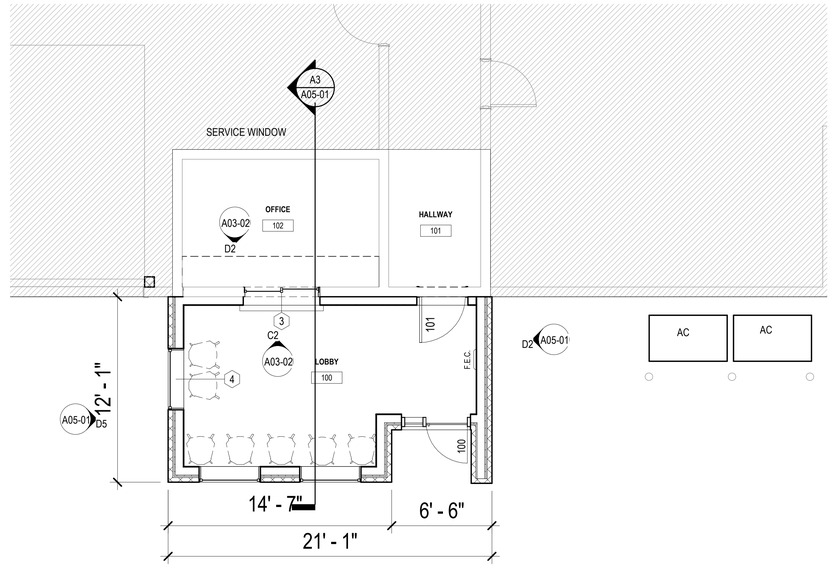
1 REFER TO ELEVATIONS FOR ADDITIONAL FINISH INFORMATION.
2 REFER TO REFLECTED CEILING PLANS FOR CEILING FINISH LOCATIONS AND SELECTIONS.
3 REFER TO DOOR, FRAME AND HARDWARE INFORMATION FOR FINISHES OF DOORS AND FRAMES.
4 MAKE ALL FLOOR FINISH TERMINATIONS AT THE CENTERLINE OF DOOR AND CASED OPENINGS, UNLESS NOTED OTHERWISE.
5 PAINT BEGINS FROM WALL EDGES AND CORNERS, U.N.O.
6 IF PAINT ENDS ON OUTSIDE CORNER, PROVIDE CLEAN TRANSITION.
7 ALL OUTLET AND LIGHT SWITCH COVERS TO BE STANDARD WHITE, UNO.
8 ALL WALLS (PT-1)(EGGSHELL FINISH), U.N.O.
9 ALL WALL BASE (WB-1), U.N.O. APPLIED TO ALL AREAS OF EXPOSED GYP. PARTITIONS.



D2 OFFICE (102) - SOUTH ELEVATION
3/8" = 1'-0"



C2 LOBBY (100) - SERVICE WINDOW
3/8" = 1'-0"

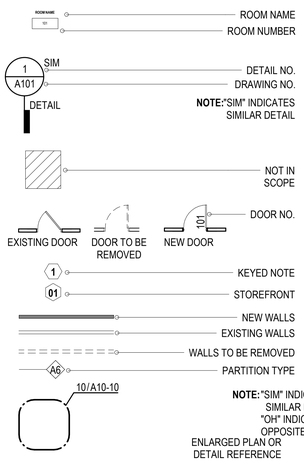


A4 LEVEL 1 - FLOOR PLAN
1/4" = 1'-0"

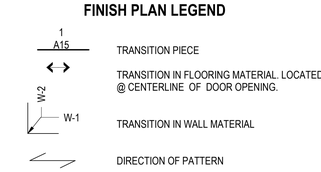
GENERAL NOTES - FLOOR PLAN

1 THESE NOTES APPLY TO ALL FLOOR PLAN SHEETS
2 DIMENSIONS ON PLANS ARE TO THE FACE OF GYPSUM BOARD, EXPOSED FACE OF MASONRY (IF PRESENT), EXPOSED FACE OF CONCRETE, OR CENTERLINE OF COLUMNS OR OTHER STRUCTURAL MEMBERS, UNLESS NOTED OTHERWISE
3 INSTALL VERTICAL CONTROL JOINTS IN GYPSUM BOARD WHERE WALL LENGTH EXCEEDS 30 FEET, AND AT EACH SIDE OF OPENINGS THAT DO NOT TERMINATE AT A CEILING, AND OTHER LOCATIONS INDICATED, AND IN ACCORDANCE WITH GA-216
4 FINISH FLOOR ELEVATIONS NOTED ARE TAKEN FROM THE TOP OF STRUCTURAL CONCRETE.
5 REFER TO FINISH FLOOR PLANS FOR EXTENT OF SPECIAL FINISHES AND FOR FLOOR FINISH PATTERNS
6 DO NOT CUT ANY STRUCTURAL ELEMENT IN A MANNER THAT WILL DIMINISH THEIR LOAD CARRYING CAPACITY. NOTIFY STRUCTURAL ENGINEER AND DO NOT PROCEED WITH ANY STRUCTURAL CUT WITHOUT HIS WRITTEN APPROVAL
7 ALL WOOD BLOCKING CONCEALED WITHIN THE BUILDING CONSTRUCTION IS FIRE-RETARDANT-TREATED
8 REFER TO MEP SERIES DRAWINGS FOR ITEMS REQUIRED BUT NOT SHOWN ON ARCHITECTURAL DRAWINGS. PROVIDE LOCKABLE ACCESS PANELS AT ALL LOCATIONS NOTED OR LOCATIONS REQUIRING ACCESS AS INDICATED ON MEP DRAWINGS. PROVIDE NECESSARY BLOCKING, FRAMING, ETC. FOR ACCESS PANELS.
9 UNLESS NOTED OTHERWISE, HINGE JAMBS OF DOORS SHALL BE HELD 4 INCHES OFF ADJACENT PERPENDICULAR WALLS TO FACE OF DOOR FRAME
10 UNLESS NOTED OTHERWISE, PROVIDE A MINIMUM OF 18 INCHES OF CLEAR FLOOR SPACE BETWEEN THE FACE OF THE STRIKE JAMB OF DOORS TO ADJACENT PERPENDICULAR WALLS. THIS REQUIREMENT DOES NOT APPLY TO NON-ACCESSIBLE TOILET STALLS.
11 PROVIDE APPROPRIATE FIRESTOPPING ASSEMBLIES AT ALL PENETRATIONS OF RATED WALL OR FLOOR ASSEMBLIES
12 THESE GENERAL NOTES APPLY TO ALL FLOOR PLANS, UNLESS NOTED OTHERWISE

DEMOLITION PLAN AND FLOOR PLAN LEGEND



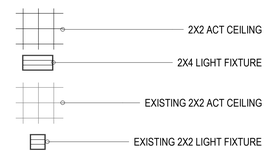
FINISH PLAN LEGEND



FLOOR HATCH PATTERN LEGEND

SEALED CONCRETE (SC-1)

REFLECTED CEILING PLAN LEGEND



FINISH PLAN KEYED NOTES

1 EXISTING FINISHES TO REMAIN.
2 (CR-1) CHAIR RAIL TO BE PLACED ON ALL LOBBY WALLS AT 2' - 10" HEIGHT (ALIGNED TO BOTTOM OF COUNTERTOP).

RCP KEYED NOTES

1 EXISTING ACT AND LIGHT FIXTURES TO REMAIN.

PLAN NORTH
TRUE NORTH

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN FOUNDED 1839

ST. ELMO SERVICE CENTER 8 RENOVATIONS

KEY PLAN

NO.	REVISION	DATE

REGISTERED ARCHITECT BONITA TRICE GRAY 23015 STATE OF TEXAS
03/19/2021
BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:

FLOOR PLAN - LEVEL 1

DATE: 03/19/2021
REVIEWED BY: GSC
PROJECT NO.: 202001400
SHEET NO.:

A03-02

GSC - 202001400 ST. ELMO SERVICE CENTER 8 RENOVATIONS

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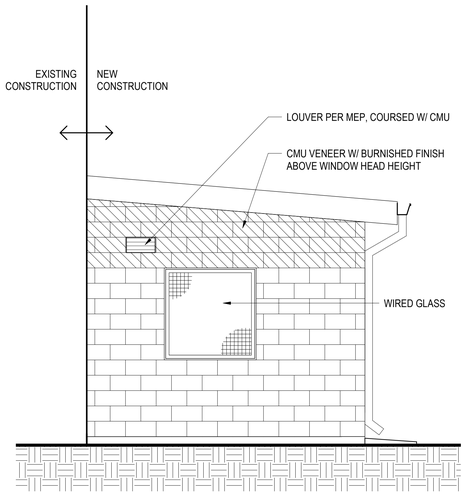
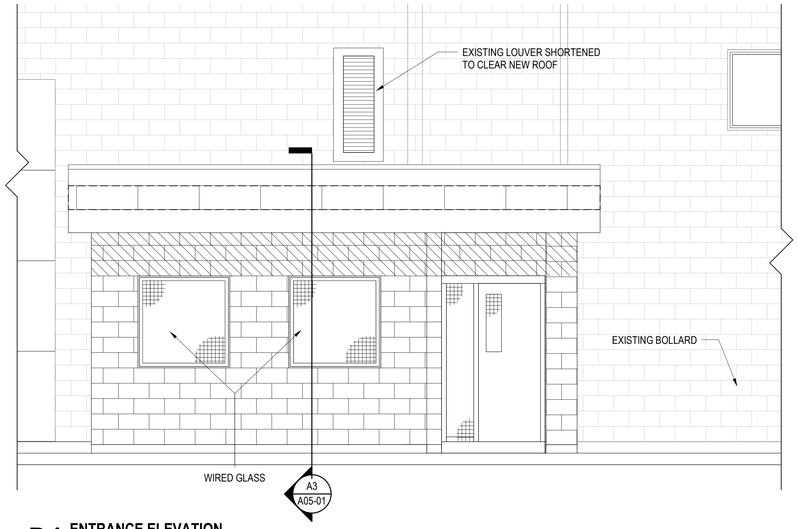
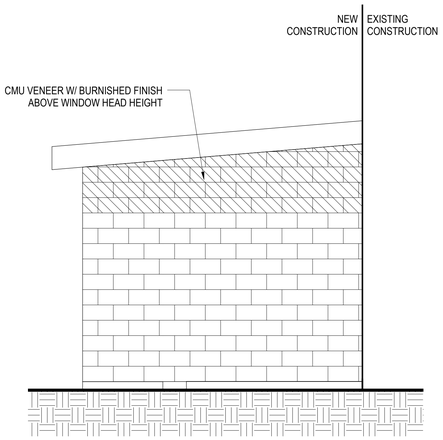


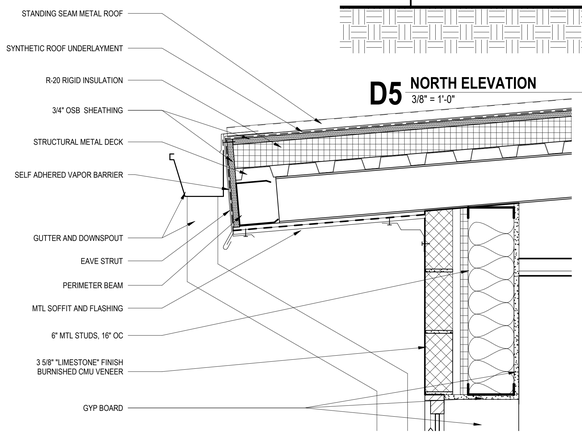
D5 NORTH ELEVATION
3/8" = 1'-0"

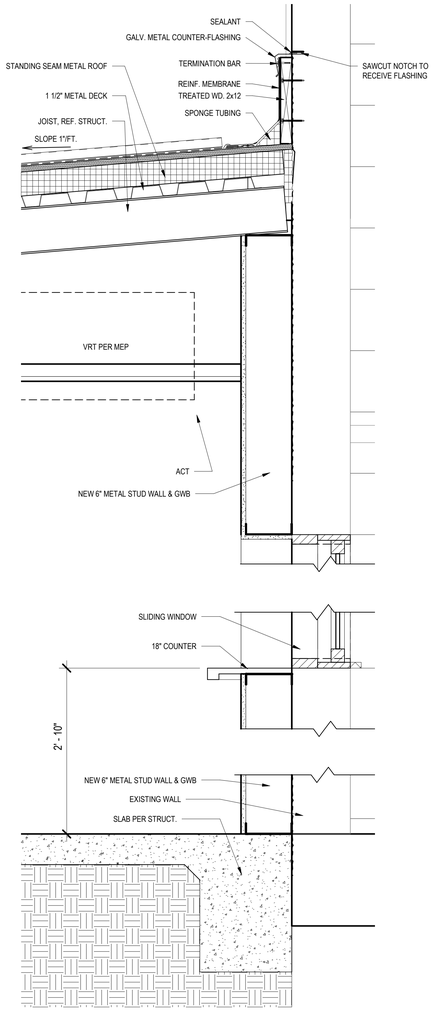


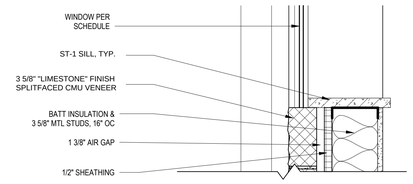
D4 ENTRANCE ELEVATION
3/8" = 1'-0"

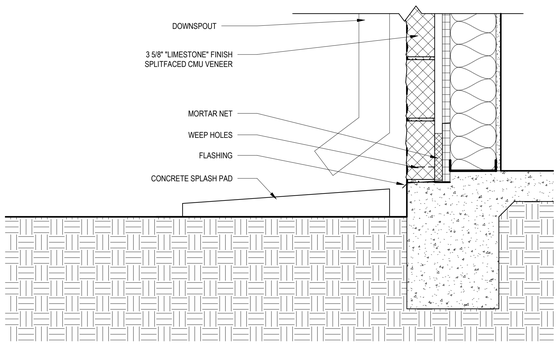


D2 SOUTH ELEVATION
3/8" = 1'-0"



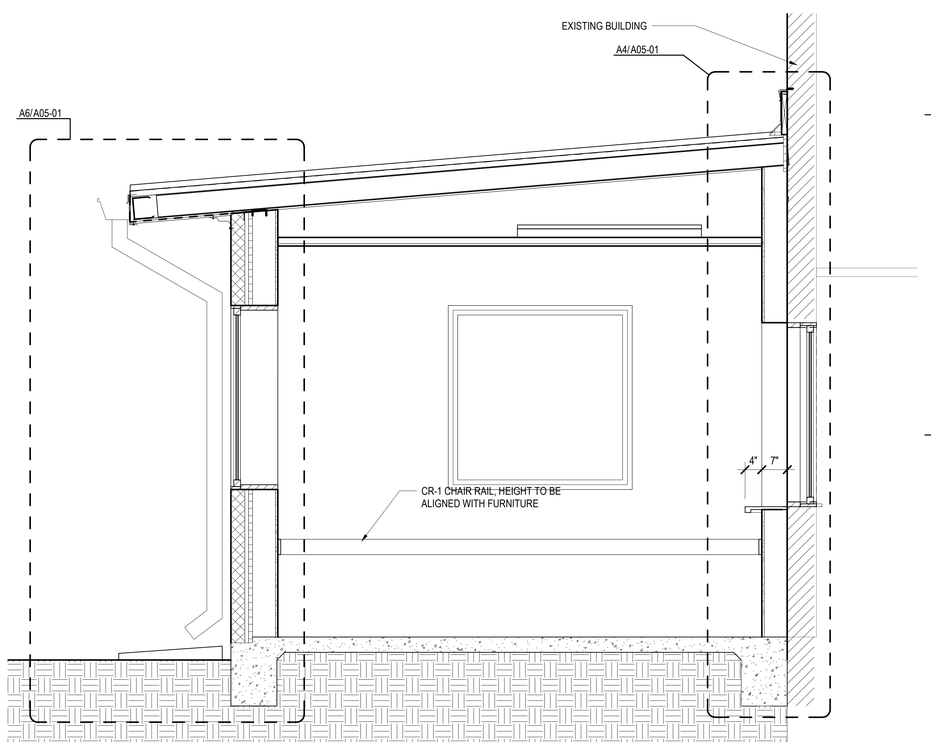






A6 SECTION AT NEW WALL
1 1/2" = 1'-0"

A4 SECTION AT EXISTING
1 1/2" = 1'-0"



A3 BUILDING SECTION
3/4" = 1'-0"

GSC Architects
3100 Alvin Devane Blvd
Bldg. A, Suite 200-B
Austin, TX 78741
Tel: 512.477.9417

CITY OF AUSTIN · FOUNDED 1839 ·

ST. ELMO SERVICE CENTER 8
RENOVATIONS

KEY PLAN

NO.	REVISION	DATE
1	Revision 1	Date 1

REGISTERED ARCHITECT BONITA TRICE GRAY 13015 STATE OF TEXAS
04/08/2021
BONITA TRICE GRAY TX ARCHITECT LIC # 13015

SHEET NAME:

EXTERIOR ELEVATIONS & SECTIONS

DATE: 04/08/2021
REVIEWED BY: GSC
PROJECT NO.: 202001400
SHEET NO.:

A05-01

GSC - 202001400 ST. ELMO SERVICE CENTER 8 RENOVATIONS

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COORDINATION

A. THE CONTRACTOR SHALL COMPARE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER SERIES DRAWINGS AND REPORT ANY DISCREPANCIES BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS PRIOR TO FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

B. ONLY LARGER SLEEVE OPENINGS AND FRAMED OPENINGS IN STRUCTURAL FRAMING COMPONENT MEMBERS ARE INDICATED ON THE STRUCTURAL DRAWINGS. HOWEVER, ALL SLEEVES, INSERTS AND OPENINGS, INCLUDING FRAMES AND/OR SLEEVES SHALL BE PROVIDED FOR PASSAGE, PROVISION AND/OR INCORPORATION OF THE WORK OF THE CONTRACT, INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL AND PLUMBING WORK. THIS WORK SHALL INCLUDE THE COORDINATION OF SIZES, ALIGNMENT, DIMENSIONS, POSITION, LOCATIONS, ELEVATIONS AND GRADES AS REQUIRED TO SERVE THE INTENDED PURPOSE. OPENINGS NOT INDICATED ON THE STRUCTURAL DRAWINGS, BUT REQUIRED AS NOTED ABOVE, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

C. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR FLOOR ELEVATIONS, SLOPES, DRAINS AND LOCATION OF DEPRESSED AND ELEVATED FLOOR AREAS.

D. COMPATIBILITY OF THE STRUCTURE AND PROVISIONS FOR BUILDING EQUIPMENT SUPPORTED ON OR FROM STRUCTURAL COMPONENTS SHALL BE VERIFIED AS TO SIZE, DIMENSIONS, CLEARANCES, ACCESSIBILITY, WEIGHTS AND REACTION WITH THE EQUIPMENT FOR WHICH THE STRUCTURE HAS BEEN DESIGNED PRIOR TO SUBMISSION OF SHOP DRAWINGS AND DATA FOR EACH PIECE OF EQUIPMENT AND FOR STRUCTURAL COMPONENTS. DIFFERENCES SHALL BE NOTED ON THE SUBMITTALS.

E. SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL ITEMS AND SUBMITTED FOR REVIEW BY THE ENGINEER. STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS. ALL ITEMS DEVIATING FROM THE STRUCTURAL DRAWINGS OR FROM PREVIOUSLY SUBMITTED SHOP DRAWINGS SHALL BE CLOUDED.

F. THE DETAILS DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE STRUCTURAL DRAWINGS IN ALL AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS.

G. WHERE EXISTING CONCRETE IS TO BE DRILLED, CORED, OR CUT, THE GENERAL CONTRACTOR SHALL LOCATE, BY NON-DESTRUCTIVE MEANS SUCH AS SCANNING, ALL EXISTING MILD AND PT REINFORCING STEEL IN THE EXISTING CONCRETE PRIOR TO THE DRILLING, CORING, OR CUTTING. THE GENERAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO MILD OR PT REINFORCING STEEL IS DAMAGED OR COMPROMISED.

H. ALL DIMENSIONS AND CONDITIONS OF EXISTING CONSTRUCTION SHALL BE VERIFIED AT THE JOB SITE PRIOR TO THE PREPARATION OF SHOP DRAWINGS. DIFFERENCES BETWEEN EXISTING CONSTRUCTION AND THAT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE REFERRED TO THE ARCHITECT. DIFFERENCES SHALL ALSO BE CLOUDED ON THE SHOP DRAWINGS. CUTTING OR CORING OF ANY STRUCTURAL CONCRETE OR STEEL ELEMENTS SHALL BE COORDINATED WITH THE ENGINEER.

I. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER. TEMPORARY SUPPORTS SHALL NOT RESULT IN THE OVERSTRESS OR DAMAGE OF THE ELEMENTS TO BE BRACED NOR ANY ELEMENTS USED AS BRACE SUPPORTS.

J. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR AND THEIR SUB-CONTRACTORS SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCES AND SAFETY MEASURES INCLUDING, BUT NOT LIMITED TO, ADHERENCES TO ALL OSHA GUIDELINES. THE ENGINEER SHALL NOT HAVE CONTROL OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THESE PERSONS TO CARRY OUT THE WORK IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS.

K. WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.

L. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF TSEN ENGINEERING IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK IS PROCEEDING IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION IS NOT INTENDED TO BE A CHECK OF THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER A PERIODIC CHECK IN AN EFFORT TO INFORM THE OWNER AGAINST DEFECTS AND DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

CODES & REFERENCED REPORTS

A. THE GENERAL BUILDING CODE(S) USED AS THE BASIS FOR THE STRUCTURAL DESIGN ARE AS FOLLOWS:
   1. INTERNATIONAL BUILDING CODE, 2015 EDITION
   2. INTERNATIONAL EXISTING BUILDING CODE, 2015 EDITION

B. STRUCTURAL CONCRETE: BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, AMERICAN CONCRETE INSTITUTE, ACI 318, AS REFERENCED BY THE GENERAL BUILDING CODE.

C. CONCRETE MASONRY: BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES, AMERICAN CONCRETE INSTITUTE, ACI 530, AS REFERENCED BY THE GENERAL BUILDING CODE.

D. STRUCTURAL STEEL: MANUAL OF STEEL CONSTRUCTION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION INC., ANSI/AISC 360, AS REFERENCED BY THE GENERAL BUILDING CODE.

E. GEOTECHNICAL REPORT: FOUNDATION ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH INFORMATION PROVIDED IN THE FOLLOWING GEOTECHNICAL REPORT:

GEOTECHNICAL ENGINEER:	Terracon Consultants, Inc.
REPORT NUMBER:	96195433
DATE:	14-Oct-20

SUBMITTALS

A. SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL ITEMS AND SUBMITTED FOR REVIEW BY THE ENGINEER. STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS. ALL ITEMS DEVIATING FROM THE STRUCTURAL DRAWINGS OR FROM PREVIOUSLY SUBMITTED SHOP DRAWINGS SHALL BE CLOUDED.

B. CONTRACTOR SHALL REVIEW SHOP DRAWINGS FOR COMPLIANCE WITH THE STRUCTURAL DRAWINGS AND SHALL CERTIFY THAT THEY HAVE DONE SO BY A STAMP NOTING THAT THE DRAWINGS HAVE BEEN "APPROVED" AND WHICH BEARS THE SIGNATURE (OR INITIALS) OF AN AUTHORIZED REPRESENTATIVE OF THE CONTRACTOR AND THE DATE. SUBMITTALS WHICH DO NOT REFLECT THE CONTRACTOR'S APPROVAL, SIGNATURE AND DATE WILL BE RETURNED WITHOUT REVIEW.

C. CONTRACTOR SHALL BE RESPONSIBLE FOR DELAYS CAUSED BY REJECTION OF INADEQUATE SHOP DRAWINGS.

D. WHERE REVIEW AND RETURN OF SHOP DRAWINGS IS REQUIRED OR REQUESTED, THE ENGINEER WILL REVIEW EACH SUBMITTAL AND, WHERE POSSIBLE, RETURN WITHIN TWO (2) WEEKS OF RECEIPT.

E. CORRECTIONS OR COMMENTS ON SHOP DRAWINGS OR MANUFACTURER'S DATA SHEETS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. ENGINEER'S REVIEW IS FOR GENERAL CONFORMANCE WITH THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRECTING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, AND COORDINATING THE WORK WITH THAT OF ALL OTHER CONTRACTORS.

F. REFER TO INDIVIDUAL SECTIONS FOR SPECIFIC SUBMITTAL REQUIREMENTS.

G. CONTRACTOR SHALL PROVIDE SUBMITTALS ELECTRONICALLY TO ARCHITECT. ARCHITECT WILL PROVIDE TO ENGINEER FOR REVIEW AND COMMENT. ENGINEER WILL RETURN REVIEWED SUBMITTAL TO ARCHITECT FOR DISTRIBUTION TO THE ARCHITECT, OWNER, AND CONTRACTOR. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND DISTRIBUTING ENGINEER'S COMMENTS TO THEIR SUBCONTRACTORS.

DESIGN LOADS

A. DEAD LOADS INCLUDE THE SELF-WEIGHT OF THE STRUCTURAL ELEMENTS AND THE FOLLOWING SUPERIMPOSED LOADS:

1.	CEILING AND MECHANICAL AT ROOF	10 PSF
2.	ROOFING AND RIGID INSULATION	8 PSF

B. LIVE LOADS INCLUDE THE FOLLOWING UNIFORMLY DISTRIBUTED LOADS OR CONCENTRATED LOADS, WHICHEVER PRODUCES THE GREATER LOAD EFFECTS.

	OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs.)
1a.	"PARTITIONS AT AREAS WITH LIVE LOAD OF 80 PSF OR LESS"	15	N/A
1b.	INTERIOR WALLS AND PARITIONS > 6 FEET IN HEIGHT (APPLIED HORIZONTALLY)	5	N/A
2.	OFFICE BUILDINGS		
	a. LOBBIES AND FIRST FLOOR CORRIDORS	100	2000
3.	ROOF - UNREDUCED	20	N/A

C. SNOW LOADS
   1. GROUND SNOW LOAD, Pg 5 PSF

D. WIND LOADS
   1. WIND LATERAL LOAD ON STRUCTURAL FRAME IS BASED ON ASCE 7-10 USING THE FOLLOWING:

a.	BASIC WIND SPEED (ULTIMATE)	115 MPH
b.	EXPOSURE	C
c.	INTERNAL PRESSURE COEFFICIENT, Gcpi	+/-0.18
d.	RISK CATEGORY	II

   2. COMPONENTS AND CLADDING WIND PRESSURES:

SURFACE	(PSF)	ZONE	AREA At (ft2)
EXTERIOR WALLS	x	INTERIOR AND EDGE	10 OR LESS
	x	INTERIOR	10 OR LESS
	x	EDGE	10 OR LESS
	x	INTERIOR AND EDGE	500 OR GREATER
	x	INTERIOR	500 OR GREATER
	x	EDGE	500 OR GREATER
ROOF*	x	INTERIOR	10 OR LESS
	x	EDGES	10 OR LESS
	x	CORNERS	10 OR LESS
	x	INTERIOR	100 OR GREATER
	x	EDGES	100 OR GREATER
	x	CORNERS	100 OR GREATER

   - PRESSURES FOR TRIBUTARY AREAS IN BETWEEN THE LISTED VALUES MAY BE LINEARLY INTERPOLATED.
   - NEGATIVE VALUE SIGNIFIES PRESSURE ACTING AWAY FROM THE SURFACE (SUCTION).
   - EDGE AND CORNER ZONE DISTANCES SHALL BE DETERMINED IN ACCORDANCE WITH REFERENCED STANDARD.
   - PRESSURES ON PARAPETS SHALL BE DETERMINED BY COMBINING POSITIVE AND NEGATIVE WALL PRESSURES OR WALL AND ROOF PRESSURES LISTED ABOVE IN ACCORDANCE WITH THE REFERENCED STANDARD.
   * PRESSURES ARE FOR GROSS UPLIFT CONDITIONS. REFER TO ROOF PLAN(S) FOR NET UPLIFT VALUES FOR DESIGN OF JOISTS, JOIST GIRDERS, AND BRIDGING.

E. SEISMIC LOADS
   1. THE STRUCTURE AND STRUCTURAL COMPONENTS OF THE BUILDING HAVE BEEN DESIGNED IN ACCORDANCE WITH GENERAL BUILDING CODE WITH THE FOLLOWING CRITERIA FOR AUSTIN, TEXAS PER IBC 2012/2015:

a.	SEISMIC IMPORTANCE FACTOR, IE	1.0
b.	RISK CATEGORY	II
c.	MAPPED SPECTRAL RESPONSE ACCELERATIONS	
	i. Ss (%g)	0.064
	ii. S1 (%g)	0.033
d.	SITE CLASS	D
e.	SPECTRAL RESPONSE COEFFICIENTS	
	i. SDS	0.068
	ii. SD1	0.052
f.	SEISMIC DESIGN CATEGORY	A
g.	BASIC SEISMIC-FORCE-RESISTING SYSTEM	Ordinary Masonry Shear walls
h.	DESIGN BASE SHEAR, V	5k
i.	SEISMIC RESPONSE COEFFCIENT(S), Cs	2
j.	RESPONSE MODIFICATION FACTOR(S), R	0.034
k.	ANALYSIS PROCEDURE USED	Eq. Frame

BUILDING PAD PREPARATION

A. STRUCTURAL FILL MATERIAL SHALL CONSIST OF CRUSHED LIMESTONE BASE MATERIAL THAT MEETS TXDOT ITEM 247, TYPE A, GRADE 3

B. PRIOR TO PLACING FILL MATERIAL, REMOVE ALL ORGANIC AND OTHER DELETERIOUS MATERIAL FROM THE EXISTING SUBGRADE FOR A DISTANCE OF 5 FEET BEYOND BUILDING LINE, TO A DEPTH OF 4.5 FEET BELOW EXISTING GRADE ELEVATION. ALL EXPOSED SURFACES SHALL THEN BE SCARIFIED TO A DEPTH OF 6 INCHES, WATERED AS REQUIRED AND RECOMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DEFINED BY TEX-113-E OR TEX-114-E AT A MOISTURE CONTENT WITHIN PLUS OR MINUS 3 PERCENT OF THE OPTIMUM MOISTURE CONTENT IF THE PI OF THE EXISTING SUBGRADE IS LESS THAN 25. IF THE PI OF THE EXISTING SUBGRADE IS GREATER THAN 25, THE MOISTURE CONTENT SHALL BE WITHIN PLUS 4 PERCENT OF THE OPTIMUM.

C. STRUCTURAL FILL SHALL BE PLACED IN 8 INCH LOOSE LIFTS TO FINAL SUBGRADE ELEVATION, WATERED AS REQUIRED AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DEFINED IN TEX-113-E OR TEX-114-E DEPENDING ON MATERIAL TYPE AND GRADATION. MOISTURE CONTENT SHALL BE HELD AT PLUS OR MINUS 3 PERCENT OF THE OPTIMUM MOISTURE CONTENT.

D. COMPACTION AND MOISTURE CONTENT OF SUBGRADE AND EACH LIFT OF STRUCTURAL FILL SHALL BE INSPECTED AND APPROVED BY A QUALIFIED ENGINEERING TECHNICIAN, SUPERVISED BY A GEOTECHNICAL ENGINEER.

G. PROVIDE A VAPOR RETARDER THAT CONFORMS TO ASTM E1745, CLASS A OR BETTER WITH A MAXIMUM WATER VAPOR PERMEANCE OF 0.03 PERMS PER ASTM E96. VAPOR RETARDER SHALL BE NO LESS THAN 10 MILS THICK.

H. THE ABOVE RECOMMENDATIONS HAVE BEEN PREPARED IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL REPORT.

CAST-IN-PLACE CONCRETE

A. CLASSES OF CONCRETE

CoA CONC. CLASS	MINIMUM STRENGTH (PSI) 28-DAY	7-DAY	AGG. TYPE	MAX W/C	NOTES
S	4000	2800	NWT	0.45	SEE NOTE D.

   a. "NWT" REFERS TO NORMAL CONCRETE HAVING AIR DRY UNIT WEIGHT OF APPROXIMATELY 145 PCF.
   b. MAXIMUM WATER-CEMENTITIOUS RATIO (W/C) BY WEIGHT
   c. "STRENGTH" IS REQUIRED COMPRESSIVE CYLINDER STRENGTH AT AN AGE OF 28...
   d. AS DESCRIBED IN THE CITY OF AUSTIN ITEM 403S "CONCRETE FOR STRUCTURES" TABLE 5.

MIX USAGE SCHEDULE:

DESCRIPTION OF USE	CONCRETE CLASS	CoA AGGREGATE	SLUMP	AIR ENTRAINMENT
SLAB ON GRADE	S	4 (1" NOM. SIZE)	1"-3"	4.5%

B. CEMENTITIOUS MATERIALS USED IN MIX DESIGNS MAY BE REPLACED WITH FLY ASH IN ACCORDANCE WITH ITEMS 403S.

C. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE PLACEMENTS SHALL BE PERMITTED ONLY WHERE INDICATED ON THE STRUCTURAL DRAWINGS. ALL VERTICAL CONSTRUCTION JOINTS SHALL BE MADE IN THE CENTER OF SPANS IN ACCORDANCE WITH THE TYPICAL DETAILS. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS FOR CONSTRUCTION JOINTS NOT SHOWN ON THE STRUCTURAL DRAWINGS FOR REVIEW BY THE ARCHITECT AND ENGINEER. ADDITIONAL CONSTRUCTION JOINTS MAY REQUIRE ADDITIONAL REINFORCING AS SPECIFIED BY THE ENGINEER WHICH SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

D. SUBMITTAL: SUBMIT MIX DESIGNS IN ACCORDANCE WITH SPECIFICATIONS ITEM 403S AND 033000.

E. CONCRETE SAMPLING FOR QUALITY ASSURANCE: IN ACCORDANCE WITH ITEM 403S AND 033000.

CONCRETE REINFORCING

A. CONCRETE REINFORCEMENT FOR THE PROJECT SHALL CONFORM TO THE FOLLOWING:
   1. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL IN ACCORDANCE ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE IN THE STRUCTURAL DRAWINGS OR THESE NOTES.

B. DETAILING OF REINFORCING STEEL SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE 315 DETAILING MANUAL AND ALL HOOKS AND BENDS IN REINFORCING BARS SHALL CONFORM TO ACI DETAILING STANDARDS, UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.

C. IN UNSCHEDULED GRADE BEAMS, WALLS, AND SLABS, DETAIL REINFORCING AS FOLLOWS:
   1. CLASS A LAP BEAM TOP REINFORCING BARS AT MID SPAN.
   2. CLASS A LAP BEAM BOTTOM REINFORCING BARS AT THE SUPPORTS.
   3. PROVIDE CLASS B LAP AT OTHER LOCATION PENDING ENGINEER'S APPROVAL.
   4. PROVIDE STANDARD HOOKS IN TOP BARS AT CANTILEVER AND DISCONTINUOUS ENDS OF BEAMS, WALLS AND SLABS.
   5. PROVIDE CORNER BARS FOR ALL HORIZONTAL BARS AT THE INSIDE AND OUTSIDE FACES OF INTERSECTING BEAMS OR WALLS. CORNER BARS ARE NOT REQUIRED IF HORIZONTAL BARS ARE HOOKED.
   6. PROVIDE 2-#4 DIAGONAL BARS AT ALL SLAB RE-ENTRANT CORNERS PLACED UNDER THE TOP MAT OF STEEL.

D. WELDING OF REINFORCING STEEL WILL NOT BE PERMITTED UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.

E. HEAT SHALL NOT BE USED IN THE FABRICATION OR INSTALLATION OF REINFORCEMENT.

F. REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS:

1.	EARTH-FORMED GRADE BEAMS	1 1/2" TOP, 3" SIDES, 3" BOTTOM
2.	FORMED GRADE BEAMS	1 1/2" TOP, 2" SIDES, 3" BOTTOM
3.	SLAB-ON-GRADE	AS INDICATED

G. SUBMITTAL: SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT". DO NOT REPRODUCE THE STRUCTURAL DRAWINGS FOR USE AS SHOP DRAWINGS.

STRUCTURAL LEGEND

EXAMPLE	DESCRIPTION
BEAM SIZE — W21X55 (22) c=3/4" — NUMBER OF HEADED STUDS — CAMBER	STEEL BEAM
XK — SHEAR; XK-FT — MOMENT	BEAM REACTIONS (SAME EACH END)
XK / XK — SHEAR; XK-FT / XK-FT — MOMENT	BEAM REACTIONS (UNIQUE EACH END)
XK (LL) / XK (DL) — PEMB COLUMN; XK (LL) / XK (DL); XK (LL) / XK (DL)	PEMB BEAM REACTIONS LIVE LOAD, DEAD LOAD (UNIQUE EACH END)
MOMENT CONNECTION	STEEL BEAM MOMENT CONNECTION
W10X12 — COLUMN SIZE; BP-1 — BASE PLATE TYPE MARK	STEEL COLUMN
C1 — CONCRETE COLUMN TYPE MARK	CONCRETE COLUMN
BELL — P36/48 -3'-0" — PIER TYPE MARK; T.O.PIER EL.	CONCRETE PIER
F1 -3'-0" — FOOTING TYPE MARK; T.O.FTG EL.	CONCRETE FOOTING
	STEEL BEAM SPLICE
ELEVATION CALLOUT (OPTIONAL) — WB-1 X/SX.X — BRACE MARK	VERTICAL BRACE TAG
ELEVATION CALLOUT (OPTIONAL) — MF-1 X/SX.X — FRAME MARK	MOMENT FRAME TAG
	WELDED METAL BAR GRATING
	ROOF TOP UNIT (RTU)
	LOAD BEARING MASONRY WALL
HOLD DOWN TYPE MARK — HD-1; C1 1 — SCHEDULED SHEAR WALL TYPE MARK; SCHEDULED SHEAR WALL	WOOD LOAD BEARING WALL WITH SHEAR WALL
	WOOD LOAD BEARING WALL
	CONCRETE WALL
	EXISTING CONSTRUCTION (HALFTONE)

TSEN-ENGINEERING SHEET LIST

SHEET NO.	SHEET NAME
S00-01	STRUCTURAL NOTES
S00-02	STRUCTURAL NOTES
S00-03	SPECIAL INSPECTIONS
S01-01	FOUNDATION & ROOF FRAMING PLAN
S03-01	CONCRETE DETAILS
S03-02	STEEL DETAILS

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DESIGN DEVELOPMENT

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TPBE Firm F-12778
210 Barton Springs Rd. Ste. 250
Austin, TX 78704
(512) 474 4001
Project # 9200021

St. Elmo Service Center 8
Driveway, Parking and Facility
Expansion

NO.	REVISION	DATE

STATE OF TEXAS — JAMIE BUCHANAN — 92680 — LICENSED — PROFESSIONAL ENGINEER
04/06/2021

SHEET NAME:

STRUCTURAL NOTES

DATE: 04/06/2021
REVIEWED BY: JB
PROJECT NO.: 202001400
SHEET NO.:

S00-01

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GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion

POST-INSTALLED ANCHORS AND DOWELS

A. EXPANSION ANCHORS:
1. IN CONCRETE: EXPANSION ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC 193. QUALIFYING ANCHORS SHALL BE ONE OF THE FOLLOWING:
   a. KWIK BOLT TZ (ICC-ES ESR-1917), HILTI INC.
   b. STRONG BOLT 2 (ICC-ES ESR-3037), SIMPSON STRONG-TIE CO., INC.
2. IN GROUTED MASONRY: INSTALLATION PERMITTED IN THE FACE OF WALL ONLY UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. INSTALLATION SHALL NOT BE ALLOWED WITHIN 1 1/2 INCHES OF A HEAD (VERTICAL) MORTAR JOINT. EXPANSION ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC 01. QUALIFYING ANCHORS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
   a. KWIK BOLT 3 (ICC-ES ESR-1385), HILTI INC.
   b. WEDGE-ALL (ICC-ES ESR-1396), SIMPSON STRONG-TIE CO., INC.
   c. STRONG-BOLT 2 (IAPMO-ES ER-0240), SIMPSON STRONG-TIE CO., INC.

B. SCREW ANCHORS:
1. IN CONCRETE: SCREW ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC 193. QUALIFYING ANCHORS SHALL BE ONE OF THE FOLLOWING:
   a. KWIK HUS-EZ (ICC-ES ESR-3027), HILTI INC.
   b. TITEN HD (ICC-ES ESR-2713), SIMPSON STRONG-TIE CO., INC.
2. IN GROUTED MASONRY: (INSTALLATION PERMITTED IN BOTH THE TOP AND FACE OF WALL) SCREW ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC 106. QUALIFYING ANCHORS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
   a. TITEN HD (ICC-ES ESR-1056), SIMPSON STRONG-TIE CO., INC.
   b. KWIK HUS-EZ AND HUS-EZ I (ICC-ES ESR-3027), HILTI INC.

D. ADHESIVE ANCHORS WITH THREADED ROD:
1. IN CRACKED AND UNCRACKED CONCRETE: ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC 308. QUALIFYING ANCHORS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
   a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z ROD PER ICC ESR-3187
   b. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VC 150/300 WITH HILTI HAS THREADED ROD PER ICC ESR-3187
   c. HILTI HIT-RE 500V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VC 150/300 WITH HILTI HAS THREADED ROD PER ICC ESR-3814
   d. HILTI HIT-RE 500V3 SAFE SET SYSTEM WITH HILTI HIT-RT ROUGHENING TOOL WITH HILTI HAS THREADED ROD PER ICC ESR-3814 FOR DIAMOND CORED HOLES
   e EPOXY: SET-XP (ICC-ES ESR-2508), SIMPSON STRONG-TIE CO., INC.
2. IN GROUTED CONCRETE MASONRY: (INSTALLATION PERMITTED IN BOTH THE TOP AND FACE OF WALL) ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC 58. QUALIFYING ANCHORS SHALL BE ONE OF THE FOLLOWING:
   a. ACRYLIC: HIT HY-70 (ICC-ES ESR-3342), HILTI, INC.
   b. EPOXY: SET (ICC-ES ESR-1772), SIMPSON STRONG-TIE CO., INC.
   c. ACRYLIC: AT-XP (IAPMO-ES ER-0281), SIMPSON STRONG-TIE CO., INC.
3. IN UNGROUTED CONCRETE MASONRY:
   a. EPOXY: SET (ICC-ES ESR-1772), SIMPSON STRONG-TIE CO., INC.
   b. ACRYLIC: HIT HY-70 (ICC-ES ESR-3342), HILTI, INC.
4. THREADED ANCHOR ROD SHALL BE ONE OF THE FOLLOWING:
   a. HILTI ADHESIVE: "HIT-Z" AISI 1038
   a. HILTI ADHESIVE: "HIT-Z-R" AISI TYPE 304/316 STAINLESS STEEL
   a. HILTI ADHESIVE: "HAS-E" STANDARD ISO 898 CLASS 5.8
   a. HILTI ADHESIVE: "HAS-SUPER" ASTM A193, GRADE B7
   a. HILTI ADHESIVE: TYPE "HAS" AISI TYPE 304/316 STAINLESS STEEL MEETING THE REQUIREMENTS OF ASTM F593, CONDITION CW
   b. SIMPSON ADHESIVE: STEEL MEETING THE REQUIREMENTS OF ASTM A1554, GRADE 36.
   b. SIMPSON ADHESIVE: STEEL MEETING THE REQUIREMENTS OF ASTM A1554, GRADE 36, HOT DIP GALVANIZED.
   b. SIMPSON ADHESIVE: 304 STAINLESS STEEL MEETING THE REQUIREMENTS OF ASTM A193, GRADE B8
   c. ANCHOR ROD SHALL HAVE A CHAMFERED END ON ONE END TO ACCEPT A NUT AND WASHER; IT MAY HAVE A 45-DEGREE CHISEL POINT ON THE OTHER END.
   d. NUTS AND WASHERS SHALL HAVE A PROOF LOAD STRENGTH AT LEAST AS STRONG AS ANCHOR ROD. STAINLESS STEEL NUTS AND WASHERS SHALL BE PROVIDED WITH STAINLESS STEEL RODS.

E. ADHESIVE REBAR DOWELLING
1. ADHESIVE DOWELING SYSTEMS IN CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC 308. QUALIFYING ANCHORS SHALL BE ONE OF THE FOLLOWING PRODUCTS:
   a. EPOXY: HIT-RE 500V3 SAFE SET (ICC-ES ESR-3814), HILTI INC.
   b. EPOXY: SET-XP (ICC-ES ESR-2508), SIMPSON STRONG-TIE CO., INC.
   c. ACRYLIC: HIT-HY 200 SAFE SET (ICC-ES ESR-3187), HILTI, INC.

F. ANCHOR AND DOWEL INSTALLATION
1. ANCHORS AND DOWELS OF THE SIZE AND EMBEDMENT SHOWN ON THE DRAWINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE MANUFACTURER'S RECOMMENDATIONS, AND THE MANUFACTURER'S CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT FOR THE ANCHOR. IF CONFLICTS EXIST BETWEEN THESE REFERENCED DOCUMENTS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
2. THE CONTRACTOR SHALL LOCATE ALL EXISTING REINFORCING STEEL AND OTHER EMBEDDED ITEMS CONTAINED IN THE CONCRETE USING NON-DESTRUCTIVE METHODS AND SHALL POSITION ANCHOR LOCATIONS TO AVOID CONFLICTS WITH EXISTING EMBEDDED ITEMS. ANCHOR OR DOWEL LOCATIONS CAN BE ADJUSTED BY A MAXIMUM OF 1 1/2" FROM DETAILED LOCATIONS TO AVOID CONFLICTS, BUT SHALL NEITHER CHANGE ARRANGEMENT NOR MOVE CLOSER TO A CONCRETE EDGE.
3. BASED ON FIELD VERIFIED LOCATIONS OF REINFORCING STEEL AND EMBEDDED ITEMS, THE CONTRACTOR SHALL CREATE TEMPLATES FOR EACH ANCHOR GROUP. SUBMIT TEMPLATE DIMENSIONS FOR REVIEW PRIOR TO FABRICATION OF CONNECTION PLATES.
4. HOLES FOR ANCHORS AND DOWELS SHALL BE DRILLED IN A CONTINUOUS OPERATION USING THE DRILL-BIT TYPE AND SIZE RECOMMENDED BY THE ANCHOR MANUFACTURER. HOLES SHALL BE DRILLED PERPENDICULAR TO THE CONCRETE SURFACE AND SHALL NOT BE ENLARGED OR REDIRECTED AT ANY POINT ALONG ITS LENGTH. HOLES SHALL BE DRILLED USING A HAMMER DRILL, CORING SHALL NOT BE ALLOWED, UNLESS NOTED OTHERWISE.
5. OIL FREE COMPRESSED AIR SHALL BE USED TO BLOW OUT THE HOLES; SHOP VACS, SQUEEZE BULBS, ETC. SHALL NOT BE USED. REFER TO MANUFACTURER'S INFORMATION FOR DETAILED CLEANING INSTRUCTIONS.
   a. HILTI SAFE-SET SYSTEM MAY BE USED TO ELIMINATE HOLE CLEANING WITH ADHESIVE ANCHORS.
6. ALL ABANDONED HOLES SHALL BE FILLED WITH NON-METALLIC NONSHRINK GROUT CAPABLE OF REACHING A DESIGN COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS.
7. HOLES IN CONNECTION PLATES SHALL BE NO MORE THAN 1/16" LARGER THAN THE ANCHOR DIAMETER. IF LARGER HOLES ARE REQUIRED FOR ERECTION PURPOSES, CONTRACTOR SHALL NOTIFY ENGINEER SUCH THAT A PLATE WASHER SIZE CAN BE PROVIDED.
8. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 2500 PSI MINIMUM AT AN AGE OF 21 DAYS.
9. ADHESIVE ANCHORS AND DOWELS: CONCRETE AND MASONRY SUBSTRATES SHALL HAVE THE FOLLOWING MINIMUM AND MAXIMUM TEMPERATURES AT THE TIME OF ADHESIVE ANCHOR AND DOWEL INSTALLATION:

	MINIMUM (°F)	MAXIMUM (°F)
HILTI HIT RE-500V3 SAFE SET	NONE SPECIFIED	
SIMPSON SET-XP	50	100
HILTI HY-70	41	104
HILTI HY-200 SAFE SET	14	104
SIMPSON SET	40	110
SIMPSON AT	0	100

G. THE FOLLOWING PARAMETERS WERE USED IN THE DETERMINATION OF THE ADHESIVE BOND STRESS FOR ADHESIVE ANCHORS:
1. CONCRETE TEMPERATURE RANGE:
   a. EPOXY: HIT-RE 500V3 SAFE SET (ICC-ES ESR-3814): TEMPERATURE RANGE "A" (MAX SHORT TERM TEMP = 110DEGF, MAX LONG TERM TEMP = 80DEGF)
   b. EPOXY: SET-XP (ICC-ES ESR-2508): TEMPERATURE RANGE 1 (MAX. SHORT TERM TEMP. = 110DEGF, MAX. LONG TERM TEMP. = 75DEGF)
   c. EPOXY: SET (ICC-ES ESR-1772): MAX. BASE MATERIAL TEMP. = 110DEG F
   d. ACRYLIC: HIT-HY200 SAFE SET (ICC-ES ESR-3187): TEMPERATURE RANGE "A" (MAX SHORT TERM TEMP = 104DEG F, MAX LONG TERM TEMP = 75DEG F)
   e. ACRYLIC: AT (ICC-ES ESR-5791): MAX. BASE MATERIAL TEMP. = 110DEG F
2. DRILLED HOLE CONDITION: DRY

H. FOR ADHESIVE ANCHORS INSTALLED IN A HORIZONTAL ORIENTATION SUBJECT TO SUSTAINED TENSION LOADING AND ALL UPWARDLY INCLINED (INCLUDING SOFFIT INSTALLATIONS) ORIENTATION:
1. PER ACI 318-11 (D.9.2.2): INSTALLATION SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY ACI/CRSI "ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM." CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS.

STRUCTURAL STEEL

A. MATERIAL
1. ALL HOT ROLLED STEEL MEMBERS SHALL BE NEW AND CONFORM TO ASTM SPECIFICATION A6.
2. ASTM SPECIFICATION AND GRADE - CLEARLY MARK THE GRADE ON EACH MEMBER.
3. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, STRUCTURAL STEEL MEMBERS SHALL BE:
   a. W-SHAPES SHALL CONFORM TO ASTM A992.
   b. CHANNELS SHALL CONFORM TO ASTM A36.
   c. ANGLES SHALL CONFORM TO ASTM A36.
   d. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B.
   e. ROUND HOLLOW STRUCTURAL SHAPE MEMBERS SHALL CONFORM TO ASTM A500, GRADE B Fy = 42 KSI.
   f. SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SHAPE MEMBERS SHALL CONFORM TO ASTM A500 GRADE B, Fy = 46 KSI.
   g. STRUCTURAL STEEL PLATE SHALL CONFORM TO ASTM A36.
   h. ANY OTHER STEEL SHALL CONFORM TO ASTM A36.
   i. HEADED STUD SHEAR CONNECTORS SHALL CONFORM TO ASTM A108.

B. FABRICATION
1. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER AS TO LOCATION AND TYPE OF SPLICE TO BE MADE. ANY MEMBER HAVING SPLICE NOT SHOWN AND DETAILED ON SHOP DRAWINGS WILL BE REJECTED.
2. DIMENSIONAL TOLERANCES OF FABRICATED STRUCTURAL STEEL SHALL CONFORM TO SECTION 6.4 OF THE AISC CODE OF STANDARD PRACTICE UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
3. SHOP PAINTING: PAINT STRUCTURAL STEEL WITH ONE COAT OF MANUFACTURER'S STANDARD RED OXIDE PRIMER APPLIED AT A RATE TO PROVIDE A UNIFORM DRY FILM THICKNESS OF 2.5 MILS.

C. ERECTION
1. ERECTION TOLERANCES OF ANCHOR BOLTS, EMBEDDED ITEMS, AND ALL STRUCTURAL STEEL UNLESS SPECIFIED OTHERWISE ON THE STRUCTURAL DRAWINGS SHALL CONFORM TO THE AISC CODE OF STANDARD PRACTICE.
2. FIELD CUTTING OF STRUCTURAL STEEL OR ANY FIELD MODIFICATIONS TO STRUCTURAL STEEL SHALL NOT BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
3. CONTRACTOR SHALL PROTECT ANY UNPRIMED STRUCTURAL STEEL FROM DETRIMENTAL EFFECTS OF CORROSION, AS REQUIRED, UNTIL THE STEEL IS ENCLOSED AND PROTECTED BY THE NEW CONSTRUCTION.
4. HOT DIP GALVANIZE AFTER FABRICATION ALL STRUCTURAL STEEL ITEMS AND CONNECTIONS PERMANENTLY EXPOSED TO THE WEATHER, WHETHER SPECIFIED ON THE STRUCTURAL DRAWINGS OR NOT. SUCH ITEMS INCLUDE, BUT ARE NOT LIMITED TO:
   a. SHELF ANGLES
   b. PARAPET WALL SUPPORTING MEMBERS
   c. WINDOW WASHING SUPPORT MEMBERS
   d. ALL EMBEDDED PLATES IN CONCRETE
   e. BUILDING CLADDING SUPPORT STEEL IN SPACE NOT AIR CONDITIONED AND/OR EXPOSED TO MOISTURE OUTSIDE THE EXTERIOR WATERPROOFING SURFACE IF ANY.
   f. COOLING TOWER FRAMING AND SUPPORTS
   g. COOLING TOWER SCREEN SUPPORT MEMBERS AND BRACES.
   h. RAILING EXPOSED TO WEATHER.
   i. EXAMINE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR OTHER ITEMS REQUIRED TO BE HOT DIPPED GALVANIZED. GALVANIZE ALL NUTS, BOLTS, AND WASHERS USED IN CONNECTION WITH SUCH STEEL. FIELD WELDED CONNECTIONS SHALL HAVE WELDS PROTECTED WITH "Z.R.C. COLD GALVANIZING COMPOUND" AS MANUFACTURED BY Z.R.C. COMPANY.

D. CONTRACTOR SHALL COORDINATE STRUCTURAL STEEL FIREPROOFING REQUIREMENTS. ALL INTERIOR STRUCTURAL STEEL, INCLUDING STEEL JOISTS, SCHEDULED OR INDICATED TO RECEIVE SPRAY APPLIED FIREPROOFING SHALL BE DELIVERED TO THE PROJECT SITE UNPRIMED. STEEL EXPOSED TO CORROSIVE CONDITIONS AFTER INSTALLATION SHALL BE PRIMED WITH A PROTECTIVE COATING WHICH DOES NOT DIMINISH THE BOND BETWEEN THE SPRAY APPLIED FIREPROOFING, AND THE STEEL SUBSTRATE. ANY PRIMER, AND/OR COATING APPLIED TO STRUCTURAL STEEL SHALL BE APPROVED FOR USE IN THE APPLICABLE U.L. FIRE RESISTANCE ASSEMBLY USED ON THE PROJECT.

E. SUBMITTAL: PROVIDE DRAWINGS SHOWING DETAILS FOR FABRICATION AND SHOP ASSEMBLY OF MEMBERS, ERECTION PLANS AND DETAILS. INCLUDE DETAILS OF CONNECTIONS, CAMBER, WELD PROFILES AND SIZES AND SPACING. SHOP AND ERECTION DRAWINGS SHALL NOT BE MADE USING REPRODUCTIONS OF THE STRUCTURAL DRAWINGS.

METAL DECKS

A. METAL ROOF DECK
1. SHEET STEEL FOR GALVANIZED ROOF DECK AND ACCESSORIES SHALL CONFORM TO ASTM A653, STRUCTURAL QUALITY, WITH A MINIMUM YIELD STRENGTH OF 33 KSI. GALVANIZING SHALL CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60 AS DEFINED IN A653.
2. ROOF DECK SHALL BE CONTINUOUS OVER FOUR OR MORE SUPPORTS.
3. PLACE DECK PANELS ON STRUCTURAL SUPPORTS AND ADJUST TO FINAL POSITION WITH ENDS LAPPED 2 INCHES OVER STRUCTURAL SUPPORTS. PROVIDE MINIMUM END BEARING OF 2 INCHES.
4. ROOF DECK CONNECTIONS SHALL BE AS FOLLOWS:

LOCATION	SUPPORT CONNX PATTERN	SUPPORT FASTENER	SIDELAP FASTENER/ NO PER SPAN
TYPICAL BUILDING			
INTERIOR FIELD	36/4	5/8 PW	#10 Tek/ 3
PERIMETER BAND	36/7	5/8 PW	#10 Tek/ 5
RIDGE BAND	36/7	5/8 PW	#10 Tek/ 5
CORNER ZONES	36/7	5/8 PW	#10 Tek/ 5

SEE DESIGN WIND LOAD INFORMATION OR PLANS FOR "A" DIMENSION AND INTERIOR FIELDS, PERIMETER BAND, RIDGE BAND, AND CORNER ZONES WIND LOADS.

PW = PUDDLE WELD

5. POWDER ACTUATED FASTENERS SHALL BE SELECTED BY THE CONTRACTOR FOR THE COMBINATIONS OF DECK GAUGE AND DECK SUPPORT MEMBER THICKNESS. SUBMIT PROPOSED FASTENERS WITH COMPLETE MANUFACTURER'S INFORMATION, INCLUDING DIAPHRAGM SHEAR VALUES FOR THE ENGINEER TO REVIEW.
6. PUDDLE WELDS SHALL BE 5/8" MINIMUM DIAMETER AND SHALL BE MADE THROUGH WELD WASHERS FOR DECKING LIGHTER THAN 22 GAUGE.
7. MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS SHALL NOT BE SUPPORTED BY THE METAL ROOF DECK.
8. SUBMITTAL: SUBMIT DECK LAYOUT PLANS AND DETAILS INDICATING DECK TYPE, FASTENING METHODS AND LAYOUT, SUPPORT LOCATIONS, PROJECTIONS, OPENINGS AND REINFORCEMENT, AND ANY OTHER PERTINENT DETAILS AND ACCESSORIES.

STRUCTURAL STEEL CONNECTIONS

A. WELDED CONNECTIONS
1. ALL WELDING SHALL CONFORM TO ANSI/AWS D1.1, LATEST EDITION.
2. FILLET WELDS WITH NO SIZE SPECIFIED SHALL BE 3/16 INCH OR MINIMUM SIZE REQUIRED BY AISC, WHICHEVER IS LARGER.

B. BOLTED CONNECTIONS
1. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, BOLTS SHALL BE 3/4 INCH DIAMETER AND CONFORM TO ASTM A325. BOLTS SHALL BE DESIGNED USING VALUES FOR BEARING TYPE BOLTS WITH THREAD ALLOWED IN THE SHEAR PLANE.
2. BOLTS SHALL BE TIGHTENED TO "SNUG TIGHT" AS DEFINED BY AISC, UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
3. REFER TO "STRUCTURAL STEEL SLIP-CRITICAL BOLTED CONNECTIONS" STRUCTURAL NOTES AT SLIP-CRITICAL BOLTED CONNECTIONS.

C. STRUCTURAL STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE HAVING JURISDICTION AT THE PROJECT SITE. SEALED CALCULATIONS FOR ALL CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SUBMITTED FOR THE ARCHITECT'S FILES.

D. BEAM CONNECTIONS SHALL BE DESIGNED AND DETAILED AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:
1. CONNECTIONS SHALL BE AISC TYPE 2 SIMPLE FRAMING CONNECTIONS. SHEAR TAB CONNECTIONS SHALL NOT BE USED UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, OR CONNECTIONS ARE DESIGNED AND DETAILED BY THE FABRICATOR'S REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND SEALED CALCULATIONS ARE SUBMITTED.
2. IN GENERAL, SHOP CONNECTIONS SHALL BE BOLTED OR WELDED AND FIELD CONNECTIONS SHALL BE BOLTED.
3. CONNECTIONS SHALL BE DESIGNED FOR THE REACTIONS SHOWN ON THE STRUCTURAL DRAWINGS.
4. SHORT SLOTTED HOLES IN NON-SLIP CRITICAL SHEAR PLATE CONNECTIONS SHALL BE PERMITTED PROVIDED WASHERS ARE INSTALLED IN ACCORDANCE WITH AISC REQUIREMENTS. WASHERS SHALL BE HARDENED WHERE A325 BOLTS ARE USED.

H. ALL MEMBER REACTIONS SHOWN ON THE STRUCTURAL DRAWINGS INDICATE THE MOST UNFAVORABLE EFFECT IN THE STRUCTURAL MEMBER BEING CONSIDERED, BASED ON THE AASHTO LOAD AND RESISTANCE FACTOR DESIGN (LRFD) LOAD COMBINATIONS.

I. ROOF EDGE ANGLES SHALL BE CONTINUOUS AND SHALL BE SPLICED ONLY AT SUPPORTS. SPLICES SHALL BE BUTT WELDED TO DEVELOP FULL CAPACITY OF THE MEMBER.

J. BASE PLATES
1. COLUMN BASE PLATES SHALL BE SET TO THE ELEVATION INDICATED ON THE STRUCTURAL DRAWINGS AND LEVELED USING SHIMS OR BY DOUBLE NUTS ON ANCHOR BOLTS. BASE PLATES SHALL THEN BE GROUTED WITH A NON-SHRINK, HIGH STRENGTH NONMETALLIC GROUT. TIGHTEN ANCHOR BOLTS AFTER SUPPORTED MEMBERS HAVE BEEN POSITIONED AND PLUMBED.
2. HOLE SIZES IN BASE PLATES SHALL BE OVERSIZED WITH PLATE WASHERS PER AISC TABLE 14-2. AT WIND-FRAMES, PROVIDE PLATE WASHER ON TOP OF THE BASEPLATE AND UNDER THE NUT, FIELD WELDED TO THE BASEPLATE.

K. ANCHOR RODS SHALL BE:
1. TYPICAL: ASTM F1554 GR. 36, WELDABLE.

L. FOR CONNECTIONS NOT SPECIFICALLY ADDRESSED BY THESE NOTES OR THE STRUCTURAL DRAWINGS, PROVIDE FILLET WELDS AT ALL CONTACT SURFACES SUFFICIENT TO DEVELOP THE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT.

ABBREVIATIONS

ABOVE FINISHED FLOOR	A.F.F.	LIVE LOAD	LL		
ADDITIONAL	ADD'L	LOCATION	LOC.		
ADJACENT	ADJ.	LONG LEG HORIZONTAL	LLH		
AIR CONDITIONER	A/C	LONG LEG VERTICAL	LLV		
AIR HANDLING UNIT	AHU	LONG SIDE HORIZONTAL	LSH		
ALTERNATE	ALT	LONG SIDE VERTICAL	LSV		
AMERICAN CONCRETE INSTITUTE	A.C.I.	LONGITUDINAL	LONG		
AMERICAN INSTITUTE OF STEEL CONSTRUCTION	A.I.S.C.	LOW POINT	L.P.		
ANCHOR BOLT	A.B.				
ANGLE	L	MANUFACTURER	MANUF.		
APPROXIMATE	APPROX.	MATERIAL	MAT.		
ARCHITECT	ARCH	MAXIMUM	MAX.		
ARCHITECTURAL	ARCH'L	MECHANICAL	MECH.		
AT	@	MECHANICAL, ELECTRICAL, PLUMBING	MEP		
		METAL	MTL		
BACK FACE	B.F.	MEZZANINE	MEZZ.		
BASEMENT	BSMT.	MIDDLE	MID.		
BEAM	BM	MINIMUM	MIN.		
BEARING	BRG.	MISCELLANEOUS	MISC.		
BELOW FINISH FLOOR	B.F.F.	MOMENT CONNECTION	MC		
BETWEEN	BTWN				
BLOCKING	BLKG.	NEAR SIDE	NS		
BOTTOM	BOT. OR BOTT.	NEW	(N)		
BOTTOM OF	B.O.	NOMINAL	NOM.		
BOTTOM OF STEEL	B.O.S.	NON-SHRINK	N.S.		
BRICK LEDGE	B.L.	NOT IN CONTRACT	N.I.C.		
BUILDING	BLDG.	NOT TO SCALE	N.T.S.		
		NUMBER	NO.		
CAST-IN-PLACE	C.I.P.				
CEILING	CLG.	ON CENTER	O.C.		
CENTER OF GRAVITY	C.G.	OPENING	OPNG.		
CENTER OF GRAVITY OR STRAND	C.G.S.	OPPOSITE	OPP.		
CENTERLINE	CL	OPPOSITE HAND	O.H.		
CLEAR OR CLEARANCE	CLR.	OUTSIDE DIAMETER	O.D.		
COLD FORMED STEEL	CFS	OUTSIDE FACE	O.F.		
COLUMN	COL.				
COMPRESSION	C	PAN	P		
CONCRETE	CONC.	PANEL JOINT	P.J.		
CONCRETE MASONRY UNIT	CMU	PERPENDICULAR	PERP.		
CONNECTION	CONN.	PLATE	PL		
CONSTRUCTION	CONST.	POST-TENSION(ED)	P-T		
CONSTRUCTION JOINT	CONST. JT.	POUNDS	# OR LBS.		
CONTINUOUS	CONT.	POUNDS PER CUBIC FOOT	PCF		
CONTRACTOR	CONTR.	POUNDS PER LINEAR FOOT	PLF		
CONTROL JOINT	C.J.	POUNDS PER SQUARE FOOT	PSF		
COORDINATE	COORD.	POUNDS PER SQUARE INCH	PSI		
		PRE-ENGINEERED METAL BUILDING	PEMB		
DEAD LOAD	DL	PRECAST CONCRETE	P/C		
DIAGONAL	DIAG.	PREFABRICATED	PREFAB.		
DIAMETER	DIA. OR Ø	PRELIMINARY	PRELIM.		
DIMENSION	DIM.	PROJECTION	PROJ.		
DOUBLE	DBL				
DOWEL	DWL	QUANTITY	QTY.		
DRAWING	DWG				
		REINFORCE(ING)(ED)(MENT)	REINF.		
EACH	EA.	REMAINDER	R		
EACH FACE	E.F.	REQUIRE (D)	REQ.(D)		
EACH WAY	E.W.	RETENTION SYSTEM	RET. SYS.		
ELECTRICAL	ELEC.	ROOF TOP UNIT	RTU		
ELEVATION	EL.	ROUGH OPENING	R.O.		
ELEVATOR	ELEV.				
ENGINEER	ENGR.	SCHEDULE	SCHED.		
EQUAL	EQ	SIMILAR	SIM.		
EQUIPMENT	EQUIP.	SLAB-ON-GRADE	S.O.G.		
EXISTING	EXIST.	SPECIFICATION	SPECS.		
EXISTING	(E)	SPECIFIED	SPECD.		
EXPANSION	EXP.	SQUARE	SQ		
EXPANSION JOINT	EJ	SQUARE FOOT	SF		
EXTERIOR	EXT.	STAINLESS STEEL	S.S.		
		STANDARD	STD		
FABRICATE	FAB.	STEEL	STL		
FAR SIDE	FS	STEEL JOIST INSTITUTE	S.J.I.		
FIELD VERIFY	F.V.	STIFFENER	STIFF.		
FINISH FLOOR	FF	STIRRUP	STIR.		
FIXED NUMBER	FN	STRUCTURAL	STRUCT'L		
FLOOR DRAIN	FD	STRUCTURE	STRUCT.		
FOOT (OR) FEET	FT	SUBCONTRACTOR	SUBCONTR.		
FOUNDATION	FDN				
		TEMPORARY	TEMP.		
GAGE OR GAUGE	GA.	TENSION	T		
GALVANIZED	GALV.	THICK	THK		
GENERAL CONTRACTOR	G.C.	TONGUE AND GROOVE	T&G		
		TOP AND BOTTOM	T&B		
HEADED STUD	HS	TOP OF	T.O.		
HEADER	HDR.	TOP OF BEAM	T.O.B.		
HEIGHT	HT.	TOP OF CONCRETE	T.O.C.		
HIGH POINT	H.P.	TOP OF FOOTING	T.O.F.		
HOLLOW STRUCTURAL SECTION	HSS	TOP OF JOIST	T.O.J.		
HORIZONTAL	HORIZ.	TOP OF PIER	T.O.P.		
HORIZONTAL BRACE	H.B.	TOP OF STEEL	T.O.S.		
		TOP OF WALL	T.O.W.		
INFORMATION	INFO.	TYPICAL	TYP.		
INSIDE DIAMETER	ID.				
INSIDE FACE	I.F.	UNLESS NOTED OTHERWISE	U.N.O.		
INTERIOR	INT.				
INTERMEDIATE	INTERM.	VERTICAL	VERT.		
JOINT	JT.	WATER STOP	WS		
JOIST	JST.	WELDED DEFORMED BAR ANCHOR	D.B.A.		
JOIST GIRDER	J.G.	WELDED WIRE FABRIC	W.W.F.		
		WIDE FLANGE	WF		
KIP PER LINEAR FOOT	KLF	WIND BRACE	WB		
KIP PER SQUARE FOOT	KSF	WIND LOAD	WL		
KIP PER SQUARE INCH	KSI	WITH	W/		
KIPS (1000 LBS)	K	WITHOUT	W/O		
		WORK POINT	WP		
LIGHTWEIGHT	LW.				
LIGHTWEIGHT CONCRETE	LWC.				

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Project # 9200021

DESIGN DEVELOPMENT

St. Elmo Service Center 8
Driveway, Parking and Facility
Expansion

NO.	REVISION	DATE

STATE OF TEXAS · JAMIE BUCHANAN · 92680 · LICENSED PROFESSIONAL ENGINEER

04/06/2021

SHEET NAME:

STRUCTURAL NOTES

DATE: 04/06/2021

REVIEWED BY: JB

PROJECT NO.: 202001400

SHEET NO.:

S00-02

SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE (IBC) BY A SPECIAL INSPECTOR HIRED BY THE OWNER TO PERFORM THE SPECIAL INSPECTIONS LISTED BELOW. THE SPECIAL INSPECTOR SHALL BE QUALIFIED BY AN APPROVED AGENCY ACCORDING TO THE CITY'S BUILDING OFFICIAL TO PERFORM THE SPECIAL INSPECTIONS FOR WHICH THEY WILL BE UNDERTAKING. THE CONTRACTOR SHALL COORDINATE WITH AND NOTIFY THE SPECIAL INSPECTOR OF ALL TESTS. THE SPECIAL INSPECTOR SHALL BE RESPONSIBLE TO VERIFY THAT THE ITEMS DETAILED IN THE CONSTRUCTION DOCUMENTS WERE BUILT ACCORDINGLY AND SHALL PREPARE, SIGN, AND FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE ARCHITECT FOR ALL TIME SPENT AT THE SITE. THE INSPECTOR SHALL BRING DISCREPANCIES TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE ARCHITECT PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. THESE SPECIAL INSPECTIONS ARE IN ADDITION TO THE OTHER INSPECTIONS LISTED IN THESE STRUCTURAL NOTES OR PROJECT SPECIFICATIONS.

2. WHERE STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES ARE SHOP FABRICATED, THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO THE CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS, UNLESS THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

VERIFICATION AND INSPECTION TASKS FOR WELDING OF STRUCTURAL STEEL* (AISC 360-10 TABLE N5.4)

SPECIAL INSPECTION REQUIRED	VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE
		CONTINUOUS	PERIODIC		
	1. INSPECTION TASKS PRIOR TO WELDING:				
YES	A. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	X	--	AISC 360-10 N5.4-1; AWS D1.1	1705.2.1
YES	B. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	X	--		
YES	C. MATERIAL IDENTIFICATION (TYPE/GRADE)**	--	X		
YES	D. WELDER IDENTIFICATION SYSTEM**	--	X		
YES	E. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)** 1) JOINT PREPARATION 2) DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) 3) CLEANLINESS (CONDITION OF STEEL SURFACES) 4) TACKING (TACK WELD QUALITY AND LOCATION) 5) BACKING TYPE AND FIT (IF APPLICABLE)	--	X		
YES	F. CONFIGURATION AND FINISH OF ACCESS HOLES**	--	X		
YES	G. FIT-UP OF FILLET WELDS** 1) DIMENSIONS (ALIGNMENT, GAPS AT ROOT) 2) CLEANLINESS (CONDITION OF STEEL SURFACES) 3) TACKING (TACK WELD QUALITY AND LOCATION)	--	X		
YES	H. CHECK WELDING EQUIPMENT	--	X		
	2. INSPECTION TASKS DURING WELDING:				
YES	A. USE OF QUALIFIED WELDERS	--	X	AISC 360-10 N5.4-2; AWS D1.1	1705.2.1
YES	B. CONTROL AND HANDLING OF WELDING CONSUMABLES** 1) PACKAGING 2) EXPOSURE CONTROL	--	X		
YES	C. NO WELDING OVER CRACKED TACK WELDS**	--	X		
YES	D. ENVIRONMENTAL CONDITIONS** 1) WIND SPEED WITHIN LIMITS 2) PRECIPITATION AND TEMPERATURE	--	X		
YES	E. WPS FOLLOWED** 1) SETTINGS ON WELD EQUIPMENT 2) TRAVEL SPEED 3) SELECTED WELDING MATERIALS 4) SHIELDING GAS TYPE/FLOW RATE 5 PREHEAT APPLIED 6) INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) 7) PROPER POSITION (F, V, H, OH)	--	X		
YES	F. WELDING TECHNIQUES** 1) INTERPASS AND FINAL CLEANING 2) EACH PASS WITHIN PROFILE LIMITATIONS 3) EACH PASS MEETS QUALITY REQUIREMENTS	--	X		
	3. INSPECTION TASKS AFTER WELDING:				
YES	A. WELDS CLEANED	--	X	AISC 360-10 N5.4-2; AWS D1.1	1705.2.1
YES	B. SIZE, LENGTH AND LOCATION OF WELDS	X	--		
YES	C. WELDS MEET VISUAL ACCEPTANCE CRITERIA 1) CRACK PROHIBITION 2) WELD/BASE-METAL FUSION 3) CRATER CROSS SECTION 4) WELD PROFILES 5 WELD SIZE 6) UNDERCUT 7) POROSITY	X	--		
YES	D. ARC STRIKES	X	--		
YES	E. K-AREA***	X	--		
YES	F. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	X	--		
YES	G. REPAIR ACTIVITIES	X	--		
YES	H. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	X	--		

* INSPECTION TASKS NOTED IN THIS TABLE ARE THE RESPONSIBILITY OF THE SPECIAL INSPECTOR OR QUALITY ASSURANCE INSPECTOR (QAI). THE FABRICATOR AND ERECTOR ARE RESPONSIBLE FOR ALL INSPECTION TASKS INDICATED IN AISC 360-10 SECTION N5 AND ASSIGNED TO THE QUALITY CONTROL INSPECTOR (QCI).

** INSPECTION TASKS MAY BE COORDINATED WITH THE FABRICATOR OR ERECTOR'S QUALITY CONTROL INSPECTOR (QCI) WHERE INDICATED WITH THIS FOOTNOTE. ALL OTHER TASKS SHALL BE PERFORMED BY THE SPECIAL INSPECTOR.

*** WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75 MM) OF THE WELD.

VERIFICATION AND INSPECTION TASKS FOR BOLTING STRUCTURAL STEEL* (AISC 360-10 TABLE N5.6)

SPECIAL INSPECTION REQUIRED	VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE
		CONTINUOUS	PERIODIC		
	1. INSPECTION TASKS PRIOR TO BOLTING:				
YES	A. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	X	--	AISC 360-10 N5.6-1	1705.2.1
YES	B. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	--	X		
YES	C. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)**	--	X		
YES	D. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL**	--	X		
YES	F. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	--	X		
YES	G. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	--	X		
	2. INSPECTION TASKS DURING BOLTING:				
YES	A. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED**	--	X	AISC 360-10 N5.6-2	1705.2.1
YES	B. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION**	--	X		
YES	C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING**	--	X		
YES	D. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	--	X		
	3. INSPECTION TASKS AFTER BOLTING:				
YES	A. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	X	--	AISC 360-10 N5.6-3	1705.2.1

* INSPECTION TASKS NOTED IN THIS TABLE ARE THE RESPONSIBILITY OF THE SPECIAL INSPECTOR OR QUALITY ASSURANCE INSPECTOR (QAI). THE FABRICATOR AND ERECTOR ARE RESPONSIBLE FOR ALL INSPECTION TASKS INDICATED IN AISC 360-10 SECTION N5 AND ASSIGNED TO THE QUALITY CONTROL INSPECTOR (QCI).

** INSPECTION TASKS MAY BE COORDINATED WITH THE FABRICATOR OR ERECTOR'S QUALITY CONTROL INSPECTOR (QCI) WHERE INDICATED WITH THIS FOOTNOTE. ALL OTHER TASKS SHALL BE PERFORMED BY THE SPECIAL INSPECTOR.

VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL (IBC TABLE 1705.2.2)

SPECIAL INSPECTION REQUIRED	VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE
		CONTINUOUS	PERIODIC		
	1. COLD-FORMED METAL DECK:				
YES	A. FLOOR AND ROOF DECK WELDS	--	X	SDI QA/QC	1705.2.2

VERIFICATION AND INSPECTION TASKS OF CONCRETE CONSTRUCTION (IBC TABLE 1705.3)

SPECIAL INSPECTION REQUIRED	VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE
		CONTINUOUS	PERIODIC		
YES	1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	--	X	ACI 318: CH. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
	2. REINFORCING BAR WELDING:			AWS D1.4 ACI 318: 26.5.4	--
NO	A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	--	X		
NO	B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	--	X		
NO	C. INSPECT ALL OTHER WELDS.	X	--		
YES	3. INSPECTION OF ANCHORS CAST IN CONCRETE.	--	X	ACI 318:17.8.2	--
	4. INSPECTION OF POST-INSTALLED ANCHORS HARDENED CONCRETE.				--
NO	A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED...	X	--	ACI 318: 17.8.2.4	
YES	B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	--	X	ACI 318: 17.8.2	
YES	SPECIAL INSPECTOR MUST BE CERTIFIED BY ACI/CRSI "ADHESIVE ANCHOR INSTALLER". A REPORT MUST BE SUBMITTED TO THE LICENSED DESIGN PROFESSIONAL AND BUILDING OFFICIAL DOCUMENTING, STATING HOW EACH ANCHOR WAS INSTALLED, INCLUDING THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS PER ACI 318.	--	--	ACI 318: 17.8.2.2 17.8.2.4	
YES	5. VERIFY REQUIRED DESIGN MIX.	--	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
YES	6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	--	ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12	1908.1
YES	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	--	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
YES	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	--	X	ACI 318: 26.4.7-26.4.9	1908.9
	9. INSPECTION OF PRESTRESSED CONCRETE:				
NO	A. APPLICATION OF PRESTRESSING FORCES:	X	--	ACI 318: 26.9.2.1	--
NO	B. GROUTING OF BONDED PRESTRESSING TENDONS.	X	--	ACI 318: 26.9.2.3	
NO	10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	--	X	ACI 318: 26.8	--
NO	11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	--	X	ACI 318: 26.10.2	--
YES	12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	--	X	ACI 318: 26.10.1(B)	--

VERIFICATION AND INSPECTION OF SOILS (IBC TABLE 1705.6)

SPECIAL INSPECTION REQUIRED	VERIFICATION, INSPECTION AND TESTING	INSPECTION FREQUENCY	
		CONTINUOUS	PERIODIC
YES	1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	--	X
YES	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	--	X
YES	3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	--	X
YES	4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X	--
YES	5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	--	X

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(512) 474 4001
Project # 9200021

DESIGN DEVELOPMENT

St. Elmo Service Center 8
Driveway, Parking and Facility
Expansion

NO.	REVISION	DATE

STATE OF TEXAS
JAMIE BUCHANAN
92680
LICENSED
PROFESSIONAL ENGINEER
04/06/2021

SHEET NAME:

SPECIAL INSPECTIONS

DATE: 04/06/2021

REVIEWED BY: JB

PROJECT NO.: 202001400

SHEET NO.:

S00-03

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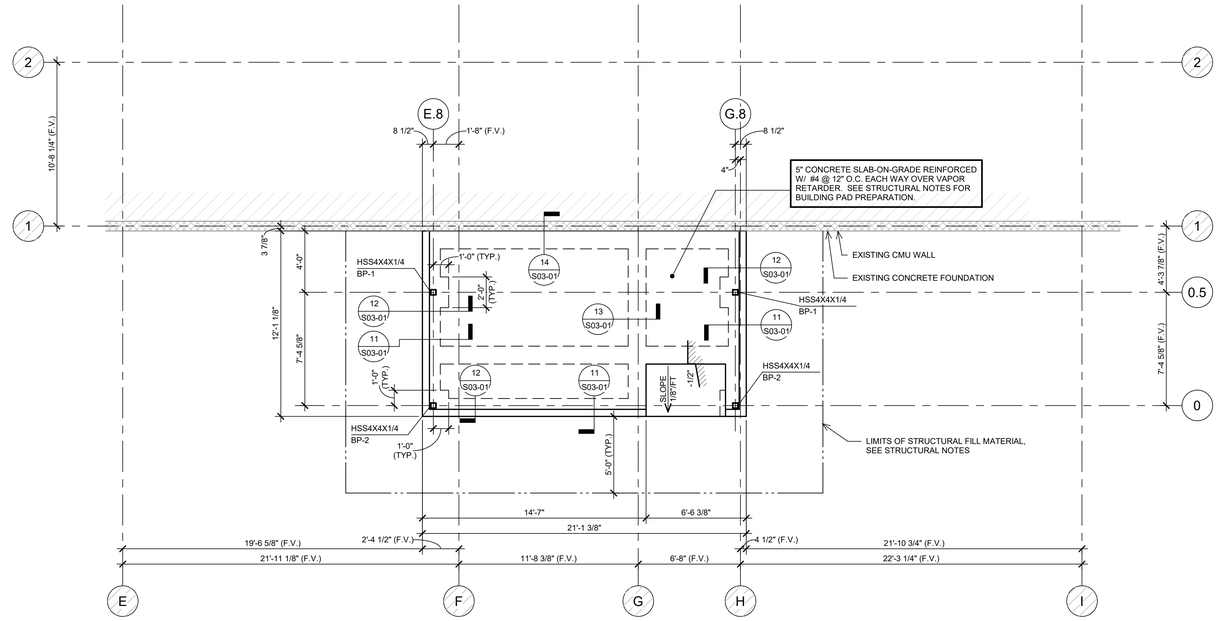
GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion

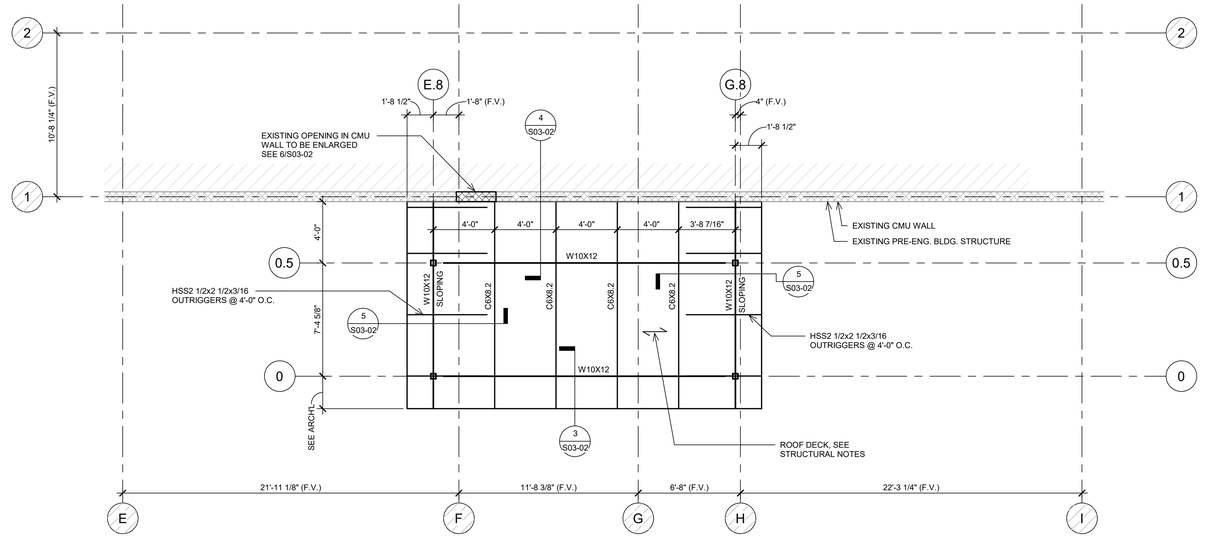


1 FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

PLAN NOTES:

1. FINISH FLOOR ELEVATION = 0'-0", UNLESS NOTED OTHERWISE.
2. TOP OF CONCRETE ELEVATION (T.O.C. EL.) = FINISH FLOOR. UNLESS RECESSED TO RECEIVE FLOORING MATERIALS.
3. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF FLOOR RECESSES, DROPS AND SLOPES NOT DIMENSIONED ON PLAN.



2 ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

PLAN NOTES:

1. TOP OF ROOF STRUCTURE IS SLOPED FOR DRAINAGE. SEE ELEVATIONS NOTED ON THE PLAN. SLOPES SHALL BE UNIFORM BETWEEN COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
2. TOP OF STEEL ELEVATION (T.O.S. EL.) = TOP OF BEAM, JOIST, OR MEMBER SUPPORTING ROOF DECK = BOTTOM OF DECK.
3. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATION AND DIMENSIONS OF ROOF PENETRATIONS NOT DIMENSIONED ON PLAN. CONTRACTOR TO COORDINATE.
4. ROOF DECK SHALL BE 1.5" DEEP TYPE "B" 22 GAUGE, GALVANIZED METAL.

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92680
LICENSED
PROFESSIONAL ENGINEER

04/06/2021

SHEET NAME:

FOUNDATION & ROOF FRAMING PLAN

DATE: 04/06/2021

REVIEWED BY: JB

PROJECT NO.: 202001400

SHEET NO.:

S01-01

GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion

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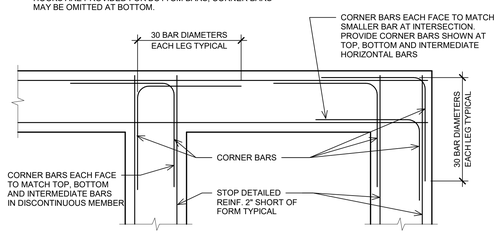
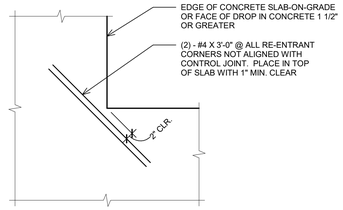
NOTES:

1. MATCH SIZE, LOCATION AND NUMBER OF HORIZONTAL BEAM AND WALL BARS, EXCEPT THAT WHERE THERE ARE MORE THAN 2 TOP OR BOTTOM BARS, ONLY THE INSIDE AND OUTSIDE BARS MUST BE MATCHED.
2. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR TOP BARS CORNER BARS MAY BE OMITTED AT TOP. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR BOTTOM BARS, CORNER BARS MAY BE OMITTED AT BOTTOM.



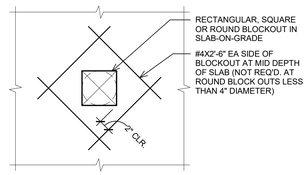
PLAN

1 TYPICAL CORNER BARS AT WALL OR GRADE BEAM INTERSECTION DETAIL
NO SCALE



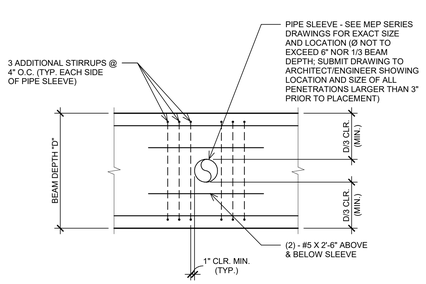
PLAN

2 TYPICAL SLAB-ON-GRADE RE-ENTRANT CORNER REINFORCING DETAIL
NO SCALE



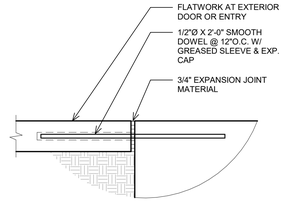
PLAN

3 TYPICAL ADDITIONAL REINFORCING AT BLOCKOUT IN SLAB-ON-GRADE DETAIL
NO SCALE



ELEVATION

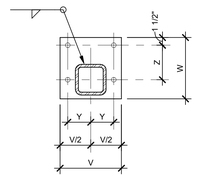
4 TYPICAL HORIZONTAL GRADE BEAM PENETRATION DETAIL
NO SCALE



5 TYPICAL FLATWORK AT EXTERIOR DOORS AND ENTRIES DETAIL
NO SCALE

BASE PLATE & ANCHOR BOLT SCHEDULE									
MARK	BASE PLATE DIMENSIONS					DETAIL	ANCHOR BOLTS		
	V	W	Y	Z	T		NO./TYPE	DIA.	EMBED LENGTH
BP-1	12"	12"	4 1/2"	4"	3/4"	7/S03-01	4/AB-1	3/4"	12"
BP-2	12"	12"	4"	6 1/2"	3/4"	8/S03-01	4/AB-1	3/4"	12"

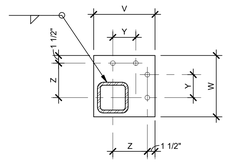
6 BASE PLATE & ANCHOR BOLT SCHEDULE
NO SCALE



NOTES:

1. WELD TO BE 1/16" SMALLER THAN THICKNESS OF TUBE.
2. FOR BASE PLATE ELEVATION SEE TYPICAL DETAIL.

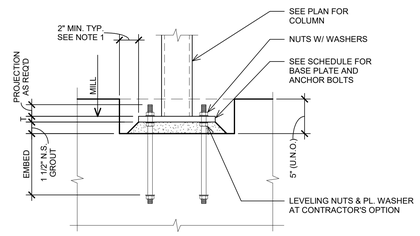
7 TYPICAL BASE PLATE DETAIL - EDGE COLUMN
NO SCALE



NOTES:

1. WELD TO BE 1/16" SMALLER THAN THICKNESS OF TUBE.
2. FOR BASE PLATE ELEVATION SEE TYPICAL DETAIL.

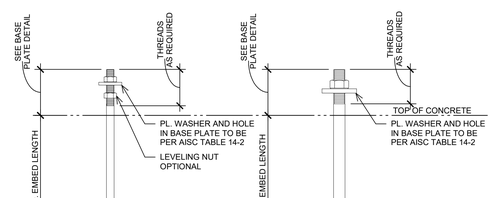
8 TYPICAL BASE PLATE DETAIL - CORNER COLUMN
NO SCALE



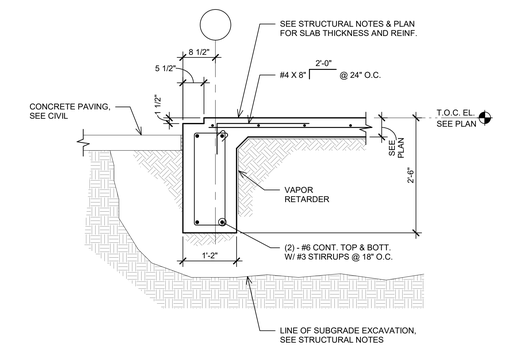
ELEVATION

NOTE:
1. CONTRACTOR TO VERIFY EXTENT OF COLUMN BLOCKOUT, AS REQUIRED, FOR BASE PLATE INSTALLATION

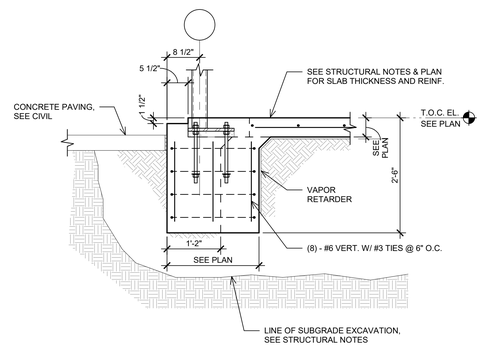
9 TYPICAL COLUMN BASE PLATE DETAIL
NO SCALE



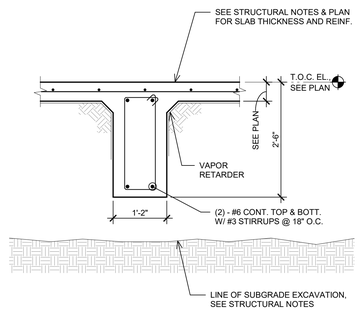
10 TYPICAL ANCHOR BOLT TYPES
NO SCALE



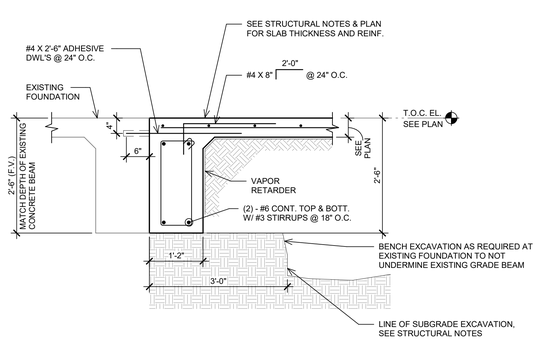
11 DETAIL
1/S01-01 SCALE: 3/4" = 1'-0"



12 DETAIL
1/S01-01 SCALE: 3/4" = 1'-0"



13 DETAIL
1/S01-01 SCALE: 3/4" = 1'-0"



14 DETAIL
1/S01-01 SCALE: 3/4" = 1'-0"

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JAMIE BUCHANAN
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PROFESSIONAL ENGINEER
04/06/2021

SHEET NAME:

CONCRETE DETAILS

DATE: 04/06/2021
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SHEET NO.:

S03-01

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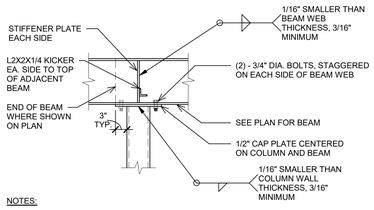
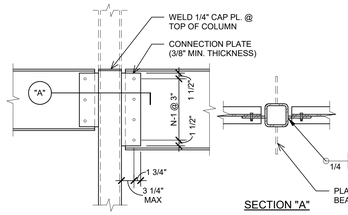


NOTES:

1. SEE ROOF PLAN FOR ROOF SLOPE. SLOPE CAP PLATES ACCORDINGLY.
2. STIFFENER PLATES SHALL BE EQUAL IN THICKNESS TO THE COLUMN WALL THICKNESS OR BEAM WEB THICKNESS, WHICHEVER IS GREATER.
3. CONNECT INTERSECTING BEAMS TO STIFFENER PLATES USING BOLTS IN SINGLE SHEAR DESIGNED FOR ECCENTRIC BEAM REACTION.

1 TYPICAL HSS COLUMN CAP PLATE TO BEAM CONNECTION DETAIL
NO SCALE



SECTION "A"

BEAM SIZE	PLATE LENGTH (L)	NO. OF BOLTS (N)	MAX BEAM REACTIONS (KIPS) 3/4" DIA	7/8" DIA
W8	6	2	21.2	25.6
W10	6	2	21.2	25.6
W12	9	3	31.8	38.4
W14	9	3	31.87	39.2
W16	12	4	42.4	52.2
W18	15	5	53	65.3
W21	18	6	63.6	78.3
W24	18	6	63.6	78.3
W27	21	7	74.2	91.3
W30	24	8	84.8	103.5
W33	27	9	95.4	115.6
W36	30	10	106	127.8
W40	33	11	116.6	139.9
W44	36	12	127.2	152.1

NOTES:

A. CONNECTIONS SHALL BE BASED ON REACTIONS SHOWN ON PLANS AND MAXIMUM BEAM REACTION IN ABOVE TABLE, U.N.O.

B. NOTED REACTIONS ARE FOR SERVICE LOADS.

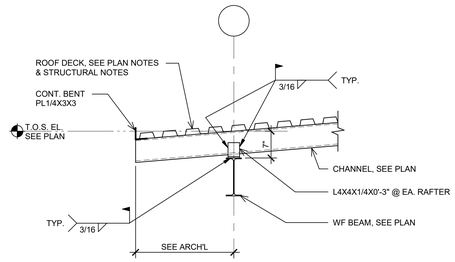
C. SEE "STRUCTURAL STEEL CONNECTIONS" IN STRUCTURAL NOTES FOR ADDN'L INFO.

D. MINIMUM CONNECTION: PLATE THICKNESS IS 3/8" TYPICAL AND 7/16" AT W33 AND DEEPER "HEAVY" CONNECTIONS.

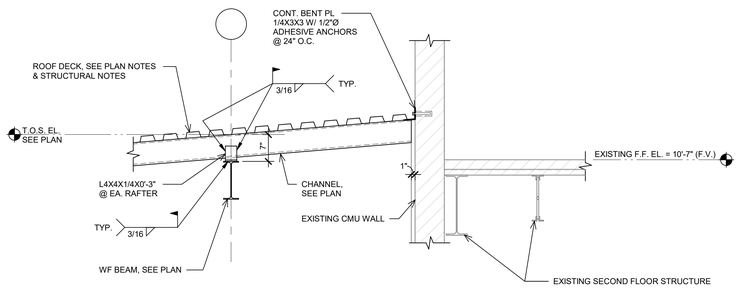
E. BOLTS ARE A325N, TYPICAL.

F. BEAM CONNECTIONS ARE "STANDARD" U.N.O. ON PLAN.

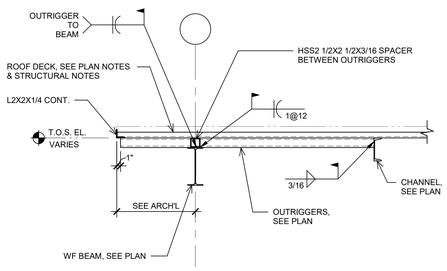
2 TYPICAL BEAM WEB TO TUBE COLUMN CONNECTION
NO SCALE



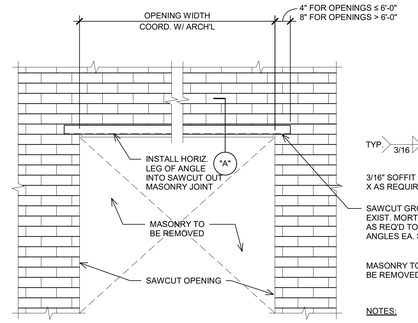
3 DETAIL
2/S01-01 SCALE: 3/4" = 1'-0"



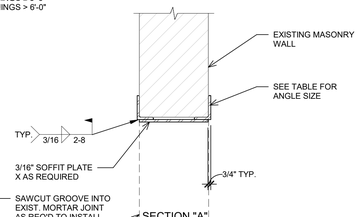
4 DETAIL
2/S01-01 SCALE: 3/4" = 1'-0"



5 DETAIL
2/S01-01 SCALE: 3/4" = 1'-0"



ELEVATION



SECTION "A"

OPENING	ANGLE SIZE
UP TO 4'-0"	L3X3X1/4
>4'-0" TO 6'-0"	L5X3X1/4 LLV
>6'-0" TO 8'-0"	L6X3 1/2X5/16 LLV

NOTES:

1. SEE ARCH DRAWINGS FOR OPENING SIZE & LOCATION.
2. SAW CUT AND INSTALL ANGLES PRIOR TO REMOVING MASONRY AT OPENING.
3. INSTALL SOFFIT PLATE AFTER MASONRY HAS BEEN REMOVED.
4. ANGLES AND PLATE SHALL BE H.D. GALVANIZED IF PERMANENTLY EXPOSED TO THE WEATHER. TOUCH UP WITH COLD GALV. AFTER WELDING.

6 TYPICAL MASONRY LINTEL DETAIL AT EXISTING WALL
NO SCALE

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STATE OF TEXAS
JAMIE BUCHANAN
92680
LICENSED
PROFESSIONAL ENGINEER

04/06/2021

SHEET NAME:

STEEL DETAILS

DATE: 04/06/2021

REVIEWED BY: JB

PROJECT NO.: 202001400

SHEET NO.:

S03-02

GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion

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(NOTE: NOT ALL SYMBOLS SHOWN ARE USED ON DRAWINGS)

MECHANICAL SYMBOL LEGEND

SYMBOL		DESCRIPTION	SYMBOL	DESCRIPTION
SINGLE LINE	DOUBLE LINE			
		RIGID DUCTWORK, 1ST NUMBER IS VISIBLE DIMENSION		FLEXIBLE CONNECTION
		FLEX DUCTWORK		CONCENTRIC PIPE REDUCER/INCREASER
		90 DEGREE ROUND DUCT DOWN		ECCENTRIC PIPE REDUCER/INCREASER
		90 DEGREE ROUND DUCT UP		PIPE SLEEVE
		ROUND RADIUS ELBOW	SLOPE	DIRECTION OF SLOPE (DNWARD)
		SIZE OR SHAPE TRANSITION	D	EQUIPMENT OR FIXTURE DRAIN LINE
		90 DEGREE S/A ELBOW DOWN		DIRECTION OF FLOW
		90 DEGREE S/A ELBOW UP		PIPING DOWN
		90 DEGREE OR RADIUS RETURN AIR OR EXHAUST ELBOW DOWN		PIPING UP
		90 DEGREE OR RADIUS RETURN AIR OR EXHAUST ELBOW UP		CAP
		SUPPLY DUCT RISER	T	THERMOSTAT
		RETURN OR EXHAUST DUCT RISER	SD	DUCT MOUNTED SMOKE DETECTOR
		RECTANGULAR RADIUS ELBOW	R	REMOTE RESET
		RECTANGULAR ELBOW WITH TURNING VANES	S	SENSOR
		RECTANGULAR BRANCH TAKE-OFF WITH ADJUSTABLE VANED EXTRACTOR	A / 150	DIFFUSER/REGISTER/GRILL DESIGNATION CFM
		S/A GRILLE OR REGISTER	AHU-1	EQUIPMENT DESIGNATION NUMBER IN SEQUENTIAL ORDER
		R/A, E/A, T/A GRILLE OR REGISTER		
		OPPOSED BLADE DUCT VOLUME DAMPER		
		ROUND DUCT TAKE-OFF DAMPER		

ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A/C	AIR CONDITIONING	KW	KILOWATT (THOUSAND WATTS)
AFF	ABOVE FINISHED FLOOR		
AFG	ABOVE FINISHED GRADE	LAT	LEAVING AIR TEMPERATURE
AHU	AIR HANDLING UNIT	LBS	POUNDS
AUX	AUXILIARY		
		MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
BLDG	BUILDING	MCA	MINIMUM CIRCUIT AMPS
BTC	BRANCH TO CONNECTION	MCB	MAIN CIRCUIT BREAKER
BTUH	BRITISH THERMAL UNIT PER HOUR	MECH	MECHANICAL
		MFR	MANUFACTURER
CD	CONDENSATE DRAIN	MIN	MINIMUM
CFM	CUBIC FEET PER MINUTE	MISC	MISCELLANEOUS
℄	CENTER	MOCP	MAXIMUM OVER CURRENT PROTECTION
CLG	CEILING		
COL	COLUMN	NA	NOT APPLICABLE
COMP	COMPRESSOR	NIC	NOT IN CONTRACT
COND	CONDENSER	NTS	NOT TO SCALE
DB	DRY BULB (TEMPERATURE)	OA	OUTSIDE AIR
DEG	DEGREES	OBD	OPPOSED BLADE DAMPER
DIA	DIAMETER	OC	ON CENTER
DN	DOWN	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
DET	DETAIL	OFOI	OWNER FURNISHED, OWNER INSTALLED
DWG	DRAWING		
DX	DIRECT EXPANSION	PH	PHASE
		PLBG	PLUMBING
E/A	EXHAUST AIR		
EXIST	EXISTING	QTY	QUANTITY
EAT	ENTERING AIR TEMPERATURE		
EQ	EQUIPMENT	R	RISE
ESP	EXTERNAL STATIC SYSTEM	RA	RETURN AIR
EXH	EXHAUST	REF	REFERENCE
		REQ	REQUIRED
F	FAHRENHEIT, FALL	RH	RELATIVE HUMIDITY
FCU	FAN COIL UNIT	RPM	REVOLUTION PER MINUTE
FF	FINISH FLOOR	RTU	ROOFTOP UNIT
FLA	FULL LOAD AMPS		
FLUOR	FLUORESCENT	SEER	SEASONAL ENERGY EFFICIENCY RATING
FPM	FEET PER MINUTE	SP	STATIC PRESSURE
FSD	COMBINATION FIRE/SMOKE DAMPER	SPECS	SPECIFICATIONS
FT	FEET/FOOT (')	SS	STAINLESS STEEL
		TEMP	TEMPERATURE
GA	GAUGE	TYP	TYPICAL
GALV	GALVANIZED		
GPM	GALLONS PER MINUTE	UH	UNIT HEATER
		UL	UNDERWRITER'S LABORATORY
HP	HORSEPOWER	UON	UNLESS OTHERWISE NOTED
HR	HOUR		
HT	HEIGHT	VAV	VARIABLE AIR VOLUME
HTR	HEATER	V	VOLTS
HVAC	HEATING VENTILATION AND AIR CONDITIONING	VD	VOLUME DAMPER
HZ	HERTZ-FREQUENCY IN CYCLE PER SECOND	VRF	VARIABLE REFRIGERANT FLOW
ID	INSIDE DIAMETER	W/	WITH
IN	INCH/INCHES (")	W/O	WITHOUT
		WB	WET BULB (TEMPERATURE)
		WP	WATER PROOF
		WT	WATERTIGHT

CODE NOTES

1. VENTILATION FOR PUBLIC SPACE COMPLIES WITH ALL APPLICABLE CODES INCLUDING ASHRAE 62.1, 2015 UMC CHAPTER 4 AND TABLE 402.1 AND CITY OF AUSTIN AMENDMENTS OF THE 2015 UMC.

   2 PEOPLE X 20 CFM PER PERSON = 40 CFM

   TOTAL REQUIRED OA = 60 CFM

2. NO DUCT MOUNTED SMOKE DETECTORS ARE NEEDED AS NO AREAS ARE SERVED BY ONE OR MORE AIR HANDLERS WITH AIR FLOWS THAT EXCEED 2000 CFM PER CODE.
3. MECHANICAL COMCHECK AND HVAC LOAD CALCULATIONS ARE PROVIDED IN THIS SUBMITTAL FOR NEW EQUIPMENT ONLY.
4. MOTORIZED VOLUME DAMPERS AND GRAVITY DAMPERS ARE SHOWN ON OUTSIDE AIR AND EXHAUST AIR PER CODE – REF. PLAN.
5. LOCKING ACCESS PORT CAPS ARE SHOWN ON THE REFRIGERANT CIRCUIT ACCESS PORTS. REFER TO REFRIGERANT PIPING DETAIL INCLUDED IN THIS DRAWING SET.
6. COMMISSIONING IS NOT REQUIRED AS SPACE IS LESS THAN 10,000 SQUARE FEET PER CODE.
7. A COMPLETE AIR BALANCE SHALL BE PERFORMED IN ACCORDANCE TO SPECIFICATION SHOWN ON M4.0. THE OWNERS MANUALS SHALL BE GIVEN TO THE OWNER AT TIME OF SWITCHOVER.
8. ECONOMIZERS ARE NOT REQUIRED FOR ALL SYSTEMS LESS THAN 54,000 BTUH OR INCLUDE HIGH EFFICIENCIES PER 2013 ASHRAE 90.1.
9. FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5 FEET MAXIMUM PER CODE.

Daikin Split System Schedule

MARK	MODEL #	Unit Type	EAT (°F) DB/WB	TC (BTUH)	SC (BTUH)	Heat EAT (°F)	TH (BTUH)	CFM	SEER	VOLT-PH	MCA	MOP	WEIGHT
HP-1	RX18RMVJU9	Outdoor	105	16,100	13,300	23	13,800	N/A	18.5	208/230-1	12.8	15	97 lbs
AHU-1	FDMQ18RVJU	Horizontal Ducted	75/63			70		675		Fed from outdoor	N/A	N/A	82 lbs

Outdoor Unit Notes:
1. Provide Field Installed Coil Guard Accessory
2. Units shall meet or exceed Min Scheduled SEER Values per AHRI 210/240

Indoor Fan Coil Notes:
1. Provide field or factory mounted condensate pump
2. Provide wired thermostat

DIFFUSER AND GRILLE SCHEDULE

MARK	CFM RANGE	SERVICE	TYPE	MOUNTING	VOLUME CONTROL	SIZE (INCHES)		MATERIAL	REMARKS
						FACE	NECK		
A	0-2000	RETURN	GRILLE	CEILING	NO	24"X24"	22"X22"	ALUMINUM	TITUS 50F
B	251-350	SUPPLY	LOUVERED	CEILING	YES	24"X24"	10"ø	ALUMINUM	TITUS TMS-AA

NOTES FOR ALL:
1. COORDINATE FRAME TYPE WITH CEILING TYPE AND WALL TYPE.
2. ALL DIFFUSERS ARE TO BE PRIMED AND PAINTED. COORDINATE WITH ARCHITECT FOR FINISH COLOR.
3. CONTRACTOR TO CONFIRM ALL SIZES WITH G.C., EXISTING CONDITIONS, FRAMING, ETC PRIOR TO ORDERING.

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St. Elmo Service Center 8
Driveway, Parking and Facility Expansion

NO.	REVISION	DATE

STATE OF TEXAS — R. ROSS ALEMAN — 98427 — LICENSED PROFESSIONAL ENGINEER

SHEET NAME:

MECHANICAL LEGEND, NOTES, AND SCHEDULE

DATE: 3/17/2021

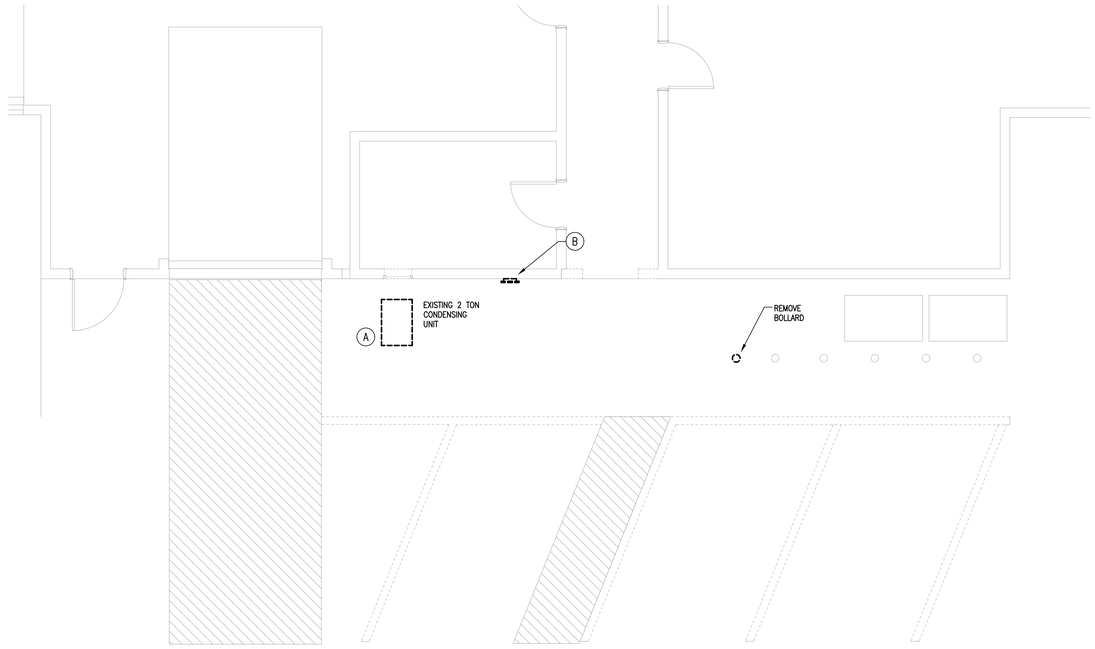
REVIEWED BY: PR

PROJECT NO.: 202001400

SHEET NO.:

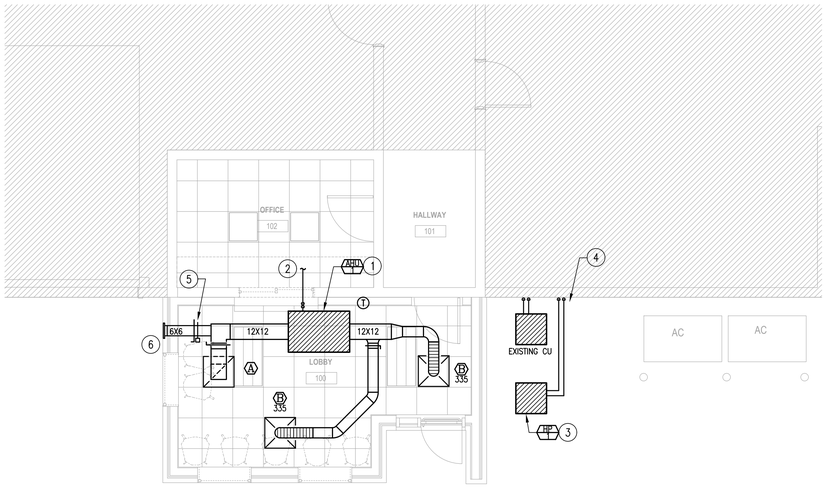
M01-01

GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion



1 DEMO PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"



2 FLOOR PLAN - MECHANICAL

SCALE: 1/8" = 1'-0"

DEMOLITION/NEW HVAC LEGEND

- EXISTING MECHANICAL WORK TO BE REMOVED OR RELOCATED. (WORK SHOWN IN DASHED LINES)
- EXISTING MECHANICAL WORK TO REMAIN. (WORK SHOWN IN SOLID LINES)
- NEW WORK SHOWN IN SOLID LINES.
- POINT OF CONNECTION FOR NEW WORK TO EXISTING WORK. TRANSITION AS REQUIRED TO MAKE PROPER CONNECTION. CONTRACTOR TO FIELD VERIFY SIZES AND EXACT LOCATION PRIOR TO FABRICATION AND INSTALLATION.

GENERAL NOTES

1. MECHANICAL CONTRACTOR TO COORDINATE WITH EXISTING SYSTEMS AND ALL OTHER TRADES PRIOR TO INSTALLING NEW SYSTEMS.
2. THESE PLANS ARE DIAGRAMMATIC IN NATURE, CONTRACTORS SHALL INCLUDE APPROPRIATE ALLOWANCES FOR OFFSETS, TRANSITIONS, FITTINGS, ETC. AS REQUIRED TO ACCOMMODATE VERTICAL AND HORIZONTAL VARIATIONS IN THE LOCATIONS AND ELEVATIONS OF DUCTWORK, PIPING AND EXISTING AND/OR OTHER TRADES CONDITIONS.
3. PENETRATIONS OF WALLS OR FLOORS FOR THE PASSAGE OF PIPING, DUCTWORK, OR OTHER EQUIPMENT SHALL BE PROPERLY SEALED AFTER INSTALLATION OF EQUIPMENT. FIELD VERIFY EXISTING WALL PENETRATIONS AND PROPERLY SEAL AS REQUIRED TO MAINTAIN WALL OR FLOOR RATING.
4. PROVIDE CODE AND MANUFACTURER-REQUIRED ACCESS TO ALL CONCEALED EQUIPMENT. COORDINATE LOCATION OF ACCESS PANELS WITH ARCHITECT.
5. PROVIDE RECTANGULAR TO ROUND DUCT TRANSITIONS AS REQUIRED.
6. ALL CONSTRUCTION DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
7. MECHANICAL CONTRACTOR TO COORDINATE WITH LIGHTING AND FIRE SPRINKLER PIPING LAYOUT ON ELECTRICAL AND ARCHITECTURAL PLANS.
8. ALL SUPPLY TAPS TO DIFFUSERS SHALL INCLUDE VOLUME DAMPERS IN DUCTWORK UNLESS OTHERWISE NOTED.
9. ALL DUCT SIZES SHALL BE FIELD VERIFIED AND COORDINATED WITH OTHER TRADES (EG ELECTRICIAN, FIRE PROTECTION, STRUCTURAL, ETC) PRIOR TO ANY FABRICATION OR INSTALLATION OF DUCTWORK. CONTRACTOR MAY ALTER SIZES TO EQUIVALENT SIZES AND DENOTE ON AS-BUILT PLANS.

DEMO NOTES

(A) RELOCATE EXISTING CONDENSING UNIT TO NEW LOCATION SHOWN ON NEW PLAN. REMOVE REFRIGERANT PIPING BACK TO HIGH ON WALL AND REROUTE TO NEW UNIT LOCATION. RETAIN EXISTING CIRCUIT FOR REUSE OF EXISTING UNIT AT NEW LOCATION.

(B) EXISTING LOUVER TO BE RELOCATED 12" HIGHER ON WALL. MODIFY EXISTING CONNECTING SYSTEMS AS REQUIRED TO ACCOMMODATE NEW LOCATION.

KEYED NOTES

(1) ROUTE 3/4" CONDENSATE LINE FROM COOLING COIL OF EACH AIR HANDLING UNIT TO LOCATION SHOWN. PROVIDE P-TRAP DIRECTLY ADJACENT TO UNIT AND POSITION AS NOT TO OBSTRUCT REQUIRED ACCESS TO EQUIPMENT COMPONENTS.

(2) ROUTE 3/4" CONDENSATE AND CONNECT TO NEAREST CONDENSATE PIPING OR NEAREST TERMINATION POINT. MAINTAIN PROPER SLOPE.

(3) DASHED LINES REPRESENT SERVICE, ACCESS, AND MANUFACTURERS CLEARANCES. CONTRACTOR TO CONFIRM AND MAINTAIN CLEARANCES WITH ACTUAL MANUFACTURER INTENDED FOR INSTALLATION PRIOR TO INSTALLING.

(4) ROUTE REFRIGERANT LINES FROM OUTDOOR CONDENSING UP ALONG EXTERIOR OF WALL TO ABOVE CEILING AND ROUTE TO MATCHING INDOOR UNIT. SEAL EXTERIOR WALL PENETRATION WATER AND AIR TIGHT.

(5) PROVIDE MOTORIZED VOLUME DAMPER (MVD) IN OUTSIDE AIR DUCT. MVD TO INTERLOCK WITH ASSOCIATED AIR HANDLER SUCH THAT MVD IS 100% OPEN WHEN FAN IS ENERGIZED AND MVD IS 100% CLOSED WHEN FAN IS DE-ENERGIZED.

(6) INSTALL NEW 15X8 LOUVER (UP TO 150 CFM) AT WALL AND CONNECT DUCTWORK TO PLENUM AS SHOWN. PROVIDE INSULATED PLENUM SAME SIZE AS LOUVER AND 12" DEEP. SLOPE PLENUM TOWARD EXTERIOR FOR DRAINING PURPOSES. LOUVER TO BE SIMILAR TO RUSKIN ELF15J, EXTRUDED ALUMINUM, STATIONARY TYPE BLADES, 1.5" FRAME, 45 DEGREE BLADE POSITION, BIRD SCREEN WITH REMOVABLE FRAME, WIND LOAD OF 20 PSF. BEGINNING POINT OF WATER PENETRATION IS AT 1075 FPM PER RUSKIN PERFORMANCE DATA (MAX VELOCITY IS SIZED FOR 700 FPM DUE TO HIGH PRESSURE DROP AT HIGHER VELOCITIES). COORDINATE WITH ARCHITECT FOR COLOR AND FINISH. SEAL AIR AND WATER TIGHT AND COMPATIBLE WITH EXTERIOR WALL. MOUNT AT MINIMUM 10'-0" ABOVE GRADE PER CODE.

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NO.	REVISION	DATE

STATE OF TEXAS
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98427
LICENSED
PROFESSIONAL ENGINEER

SHEET NAME:

FLOOR PLANS - MECHANICAL

DATE: 3/17/2021

REVIEWED BY: PR

PROJECT NO.: 202001400

SHEET NO.:

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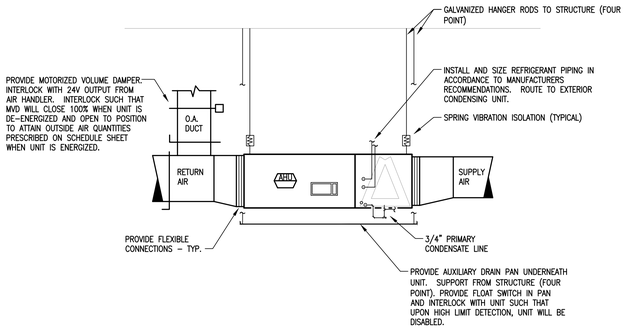
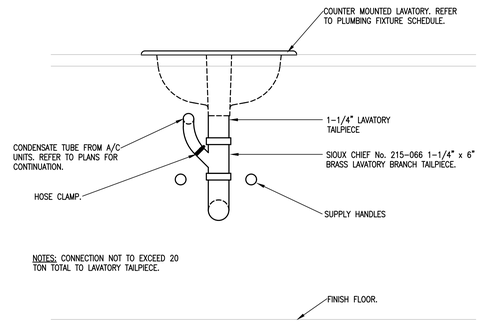
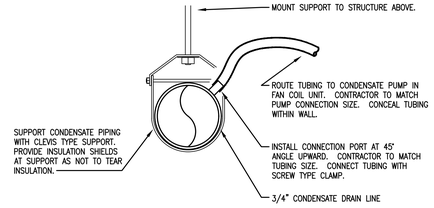
GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion



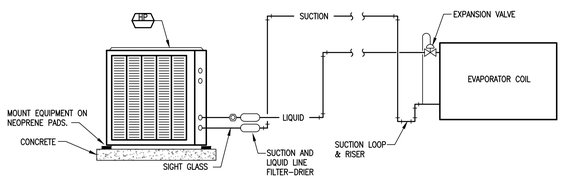
1 TYPICAL SUSPENDED HORIZONTAL AHU DETAIL
SCALE: NOT TO SCALE



2 CONDENSATE CONNECTION DETAIL
SCALE: NOT TO SCALE



3 CONDENSATE PIPING DETAIL
SCALE: NOT TO SCALE

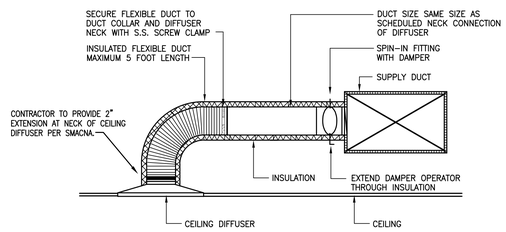


NOTE:
1. PROVIDE SOLENOID VALVES AND ASSOCIATED CONTROLS IF REQUIRED BY EQUIPMENT MANUFACTURER.
2. SIZE AND ROUTE ALL REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS.
3. CONTRACTOR TO VERIFY WITH MANUFACTURER FOR PROPER CONNECTIONS PRIOR TO INSTALLATION.
4. PROVIDE LOCKING ACCESS PORT CAPS ON THE REFRIGERANT CIRCUIT ACCESS PORTS PER CODE.

4 HEAT PUMP UNIT REFRIGERANT PIPING DIAGRAM
SCALE: NOT TO SCALE

NOTES

FOR VOLUME DAMPERS IN DUCTWORK LOCATED ABOVE RIGID GYPBOARD CEILINGS AND ARE NOT ACCESSIBLE, CONTRACTOR TO PROVIDE YOUNG REGULATOR WITH BOWDEN CABLE ASSEMBLY. PROVIDE OPTION WITH ADJUSTMENT AT FACE OF DIFFUSER/GRILLE. SEE SEPARATE DETAIL.



5 DIFFUSER CONNECTION DETAIL
SCALE: NOT TO SCALE

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NO.	REVISION	DATE

STATE OF TEXAS
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98427
LICENSED
PROFESSIONAL ENGINEER

SHEET NAME:

MECHANICAL DETAILS

DATE: 3/17/2021

REVIEWED BY: PR

PROJECT NO.: 202001400

SHEET NO.:

M03-01

GENERAL SPECIFICATIONS

1. IT IS THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS THAT THE CONTRACTOR SHALL PROVIDE A MECHANICAL INSTALLATION THAT IS COMPLETE WITH ALL ITEMS AND APPURTENANCES NECESSARY, REASONABLY INCIDENTAL, OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND EVERY ITEM IS NOT DETAILED ON THE DRAWINGS OR SPECIFIED.

A. THESE PLANS ARE DIAGRAMMATIC IN NATURE, CONTRACTORS SHALL INCLUDE APPROPRIATE ALLOWANCES FOR OFFSETS AS REQUIRED TO ACCOMMODATE VERTICAL AND HORIZONTAL VARIATIONS IN THE LOCATIONS AND ELEVATIONS OF DUCTWORK AND TERMINAL DEVICES.

B. THE TERM "PROVIDE" IN THESE SPECIFICATIONS AND ON THE DRAWINGS MEANS; FURNISH, TRANSPORT, INSTALL, CONNECT, WARRANT AND START-UP, INCLUSIVELY.

C. THE TERM "COORDINATE" IN THESE SPECIFICATIONS AND ON THE PLANS MEANS THE CONTRACTOR SHALL CONTACT OTHERS AS IS REQUIRED TO ESTABLISH A MUTUAL UNDERSTANDING OF THE PROJECT REQUIREMENTS FOR AN ITEM AND THE RESPECTIVE COSTS FOR EACH PARTY IN ORDER TO PROVIDE A COMPLETE OPERATING PRODUCT OR LABOR FOR THIS PROJECT.

D. THE INSTALLATION OF ALL SYSTEMS SHALL BE MADE BY EXPERIENCED CRAFTSMEN IN A NEAT WORKMANLIKE MANNER. ALL MATERIALS, TOOLS, PERMITS AND INSPECTIONS AND ALL OTHER COSTS AND SERVICES NECESSARY TO PROVIDE ALL MECHANICAL AND ELECTRICAL ITEMS SHALL BE FURNISHED AND PAID FOR, IN FULL, BY THE CONTRACTOR.

2. THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO PROTECT ANY EXISTING CONSTRUCTION AND ADJACENT PROPERTY, WITH WHICH WORK COMES IN CONTACT, AND OVER WHICH HE MAY TRANSPORT, HOIST OR MOVE MATERIALS, EQUIPMENT, DEBRIS, ETC., AND SHALL REPAIR SATISFACTORILY ALL DAMAGES CAUSED BY HIM DURING CONSTRUCTION.

3. THE CONTRACTOR SHALL, AT NO COST TO THE OWNER, REPLACE WITH NEW MATERIALS AND/OR EQUIPMENT, ANY ITEMS FAILING TO GIVE SATISFACTORY SERVICE DURING A 1-YEAR WRITTEN LABOR AND MATERIALS WARRANTY PERIOD TO BE INCLUDED AS PART OF THIS WORK.

A. ALL WARRANTY CERTIFICATES ISSUED SHALL BE TRANSMITTED IN WRITING TO THE OWNER

4. THE CONTRACTOR SHALL COORDINATE WITH AND NOTIFY THE OWNER'S REPRESENTATIVE FOR APPROVAL AND SCHEDULING OF ANY BUILDING SYSTEM INTERRUPTIONS OR WORK INVOLVING EXISTING AREAS. (INCLUDING NOISE, DUST, ETC.). THE CONTRACTOR SHALL RECOGNIZE ANY EXISTING BUILDING EQUIPMENT WARRANTIES PRIOR TO MODIFICATION OR CONNECTION TO SAME.

5. ALL EQUIPMENT SHALL BE NEW, UNLESS NOTED OTHERWISE, AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDATIONS FOR THE SERVICE INTENDED. PROVIDE ONLY PRODUCTS BEARING UNDERWRITERS LABORATORIES (UL) LABEL AS APPLICABLE.

6. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF ALL MAJOR ITEMS OF EQUIPMENT PRIOR TO PLACING ORDERS. SHOULD THE CONTRACTOR SUPPLY EQUIPMENT DIFFERING FROM THE SCHEDULED OR SPECIFIED ITEMS IN THE CONTRACT DOCUMENTS WITHOUT NOTIFICATION TO THE ENGINEER, HE SHALL BEAR ALL COST TO REMEDY ANY DEFICIENCIES ARISING FROM SAME.

7. PROVIDE TWO COPIES OF CLEARLY MARKED SUBMITTAL DATA ON THE FOLLOWING ITEMS AND SEND ONE COPY TO ENGINEER AND ONE COPY TO OWNER:

A. HVAC EQUIPMENT
B. DUCTWORK
C. INSULATION
D. GRILLES, REGISTERS, DIFFUSERS, AND LOUVERS
E. CONTROLS

8. MATERIALS, WORKMANSHIP, AND INSTALLATION METHODS SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND ALL CURRENT APPLICABLE CODES AND STANDARDS. SHOULD THE CONTRACTOR PROVIDE ANY ITEM OR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF CURRENT APPLICABLE CODES AND STANDARDS, CONTRACTOR SHALL BEAR ALL COSTS ARISING IN CORRECTING ANY DEFICIENCIES. CURRENT APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL ORDINANCES, UTILITY COMPANY REGULATIONS, FEDERAL REGULATIONS AND APPLICABLE REQUIREMENTS OF CITY AND NATIONALLY ACCEPTED CODES AND STANDARDS.

9. THE CONTRACTOR SHALL VISIT THE PREMISES PRIOR TO BIDDING TO BE THOROUGHLY FAMILIARIZED WITH ALL DETAILS AND COORDINATE WITH ALL EXISTING CONDITIONS TO BE ENCOUNTERED BY ALL TRADES. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD, INCLUDE ANY COSTS RELATED TO SAME IN BID, AND SHALL NOTE IN WRITING, ANY EXCEPTIONS TAKEN WHEN BIDDING THE WORK.

10. THE CONTRACTOR SHALL NOTE THE WORKING CONDITION OF ALL EXISTING EQUIPMENT TO BE REUSED AND NOTIFY THE ENGINEER OF ANY DAMAGED OR MALFUNCTIONING EQUIPMENT PRIOR TO THE START OF CONSTRUCTION.

11. VERIFY ALL MEASUREMENTS. NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF DIFFERENCES BETWEEN WORK SHOWN ON THE DRAWINGS AND ACTUAL MEASUREMENTS AT THE SITE OF CONSTRUCTION. DO NOT SCALE THE DRAWINGS.

12. EQUIPMENT SUBSTITUTIONS TO THE NAMED SPECIFIED PRODUCTS MAY BE PROPOSED BY THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL BASE BID ON THE NAMED ITEMS. THE CONTRACTOR SHALL DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER THAT THE QUALITY, CAPACITY AND SUITABILITY OF THE PROPOSED ITEM EQUALS OR EXCEEDS THAT OF THE NAMED ITEM.

13. SUBSTITUTIONS ACCEPTED BY THE ENGINEER ARE REVIEWED FOR OVERALL COMPLIANCE WITH THE DESIGN INTENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE EQUIPMENT SUBSTITUTIONS FOR THE SCHEDULED OR SPECIFIED ITEM WITH ALL OTHER TRADES. COMPENSATION TO OTHER TRADES DUE TO CHANGES IN RATED VOLTAGE, PHASE, PHYSICAL SIZE, ARRANGEMENTS, SHAPE, COLOR AND ALL OTHER CHARACTERISTICS AND THEIR RELATED EFFECTS ARISING FROM EQUIPMENT SUBSTITUTIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR MAKING THE CHANGE.

14. IN THE CASE WHERE TWO OR MORE TRADES OR CONTRACTORS ARE INVOLVED IN THE INSTALLATION OF ANY ITEM, ALL SUCH PERSONS SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK AMONG THEMSELVES TO PROVIDE A FULLY COMPLETED, FUNCTIONING INSTALLATION.

15. WHETHER ITEMS SPECIFIED OR NOTED ARE DESCRIBED AS SINGULAR OR PLURAL SHALL NOT ALTER THE REQUIREMENT THAT SUFFICIENT QUANTITIES OF THE ITEM ARE TO BE PROVIDED IN ORDER TO RESULT IN A COMPLETE INSTALLATION AND PROJECT.

16. THE DRAWINGS ARE DIAGRAMMATIC, BUT ARE REQUIRED TO BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. DATA INDICATED ON THE DRAWINGS AND IN THESE SPECIFICATIONS ARE AS EXACT AS COULD BE SECURED, BUT THEIR ABSOLUTE ACCURACY IS NOT WARRANTED. PIPING ARRANGEMENTS, AND MECHANICAL AND PLUMBING COMPONENT LOCATIONS AND THE LIKE HAVE BEEN DESIGNED FOR ECONOMY CONSISTENT WITH GOOD PRACTICE AND OTHER CONSIDERATIONS.

17. MAJOR CHANGES TO THE SYSTEMS ARRANGED AS SHOWN ON THE DRAWINGS, IF ACCEPTED, MUST BE APPROVED IN WRITING BY THE ENGINEER, PRIOR TO PROCEEDING. ALL SUCH CHANGES SHALL BE INCORPORATED INTO THE "AS BUILT" DRAWINGS AS SPECIFIED.

18. TESTING AND INSPECTION:

A. PROVIDE PERSONNEL AND EQUIPMENT, MAKE REQUIRED TESTS, AND SECURE REQUIRED APPROVALS FROM THE ENGINEER AND GOVERNMENTAL AGENCIES HAVING JURISDICTION.

B. MAKE WRITTEN NOTICE TO THE ARCHITECT/ENGINEER ADEQUATELY IN ADVANCE OF EACH OF THESE:

B.A. WHEN ROUGH-INS ARE COMPLETE, BUT NOT COVERED.
B.B. AT SUBSTANTIAL COMPLETION OF THE WORK.

C. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND TO NOT COMPLY WITH THE SPECIFIED REQUIREMENTS: WITHIN THREE DAYS AFTER RECEIPT OF NOTICE OF SUCH NON-COMPLIANCE, REMOVE THE NON-COMPLYING ITEMS FROM THE JOB SITE AND REPLACE THEM WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS, ALL AT NO ADDITIONAL COST TO THE OWNER.

19. UPON COMPLETION OF THE WORK:

A. THOROUGHLY CLEAN ALL EXPOSED PORTIONS OF THE MECHANICAL AND PLUMBING EQUIPMENT PROVIDED AND THE GENERAL AREA WHERE WORK WAS PERFORMED. REMOVE ALL TRACES OF SOIL, LABELS, GREASE, OIL, AND OTHER FOREIGN MATERIAL USING ONLY THE TYPE CLEANER RECOMMENDED BY THE MANUFACTURER OF ANY ITEM BEING CLEANED.

B. PROVIDE MANUFACTURERS' OPERATING AND MAINTENANCE INSTRUCTIONS TO THE OWNER'S REPRESENTATIVE FOR ALL MAJOR MECHANICAL AND PLUMBING EQUIPMENT PROVIDED.

C. PROVIDE (2) HOURS OF FORMAL TRAINING FOR KITCHEN HOOD AND FAN SYSTEM(S) OPERATION TO OWNER'S MAINTENANCE PERSONNEL IN ORDER TO FAMILIARIZE THEM WITH THE SYSTEM OPERATION AND REQUIRED PERIODIC MAINTENANCE.

D. DOCUMENTATION OF ANY TEST AND THE "AS-BUILT" RECORD DRAWINGS SHALL BE PROVIDED TO THE BUILDING OWNER UPON COMPLETION.

20. CONTRACTOR SHALL DESIGNATE ONE PERSON TO SERVE AS SOLE POINT OF COMMUNICATION WITH OWNER OR ENGINEER.

21. WORK AMONG ALL TRADES SHALL BE FULLY COORDINATED AS REQUIRED IN THE FIELD TO AVOID SPACE CONFLICTS AND INTERRUPTION OF THE FLOW OF WORK.

22. IN THE EVENT THAT ANY ITEM PROVIDED UNDER THIS CONTRACT IS DAMAGED PRIOR TO FINAL ACCEPTANCE THE CONTRACTOR SHALL REPLACE, NOT REPAIR, THE ITEM WITH NEW. IF AN EXISTING ITEM IS DAMAGED DURING THE CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THE ITEM TO NEAR ORIGINAL CONDITION AND PRIOR OPERATING CONDITION TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

23. CONTRACTOR SHALL PROVIDE ALL DIMENSIONS FOR BLOCK OUTS, SLEEVES, ETC., AND THE DIMENSIONED LOCATIONS OF SAME.

24. UNLESS DETAILED OTHERWISE MAINTAIN A MINIMUM CLEARANCE FOR LIGHTS OF 7" ABOVE FINISHED CEILING AND 1" MINIMUM BELOW ALL DUCTS, PIPES, CONDUIT OR ANY OTHER EQUIPMENT IN THE CEILING SPACE. PROVIDE MANUFACTURER'S RECOMMENDED SERVICE ACCESS CLEARANCE AT ALL EQUIPMENT.

25. PROVIDE ALL MATERIALS REQUIRED FOR THE SUPPORT OF SUCH ITEMS AS PIPING, DUCTS, EQUIPMENT AND SIMILAR ITEMS. THIS SHALL INCLUDE RODS, ANGLES, ETC., TO PROPERLY SUPPORT ALL ITEMS IN A PROPER AND SAFE MANNER. ALL HANGERS SHALL BE VERTICAL AND PLUMB.

26. SUITABLE FLASHINGS AND THEIR WATERTIGHT SEALING FOR OPENINGS IN THE BUILDING WALLS OR ROOF SHALL BE PROVIDED BY THE CONTRACTOR PROVIDING THE PENETRATING ITEM. THE INSTALLATION OF THE FLASHING AND ITS WATERTIGHT INTEGRITY SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR OR ENGINEER. FLASHINGS FOR PENETRATIONS MAY ALSO BE PROVIDED ENTIRELY BY THE GENERAL CONTRACTOR. ALSO, REFER TO THE ARCHITECTS SPECIFICATIONS TO COORDINATE THE COMPLETENESS OF THIS ITEM.

27. PROPERLY SUPPORT ALL EQUIPMENT AND PIPING WITHIN THE BUILDING AND PROVIDE ADEQUATE PROVISIONS FOR SLOPE AND ANCHORAGE. CONTRACTOR SHALL USE AND VERTICALLY ALIGN HANGERS AND RODS. INSERTS ETC. SHALL BE LISTED BY UNDERWRITERS' LABORATORIES FOR THE SERVICE INTENDED. THE USE OF PERFORATED STRAP AS HANGERS IS PROHIBITED.

28. SECURELY SUPPORT ALL EQUIPMENT FROM STRUCTURAL MEMBERS PROVIDED AS NEEDED, WHICH IN TURN ARE TO BE SUPPORTED DIRECTLY FROM THE BUILDING STRUCTURE. ALL HANGERS SHALL HAVE A MINIMUM FACTOR OF SAFETY OF 5. ALL PIPING SHALL BE SUPPORTED AT PROPER INTERVALS WITH ONE HANGER OR SUPPORT WITHIN 12" OF EITHER SIDE OF EACH TURN.

29. IN THE EVENT OF A CONFLICT WITHIN THE DRAWINGS AND/OR SPECIFICATIONS, PROVIDE THE GREATER QUANTITY OR HIGHER QUALITY.

30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL CONTROLS THAT WILL COMPLETELY ACCOMPLISH THE IMPLIED OR INTENDED FUNCTIONS OF THE CONTROL SYSTEM AS SHOWN OR SPECIFIED.

31. CONTRACTOR SHALL RETAIN ALL PERMITS REQUIRED TO PERFORM WORK IN SCOPE AT NO ADDITIONAL COST TO THE OWNER.

MECHANICAL SPECIFICATIONS

WORK INCLUDES BUT IS NOT NECESSARILY LIMITED TO:

A. PACKAGED ROOFTOP UNITS.
B. VRF SYSTEMS
C. FANS
I. GRILLES, REGISTERS, DIFFUSERS, AND LOUVERS
J. CONTROLS

ALL MECHANICAL EQUIPMENT SHALL BE OF THE BRAND, CAPACITY AND QUALITY AS SCHEDULED. SUBSTITUTIONS MUST BE APPROVED IN WRITING PRIOR TO BIDDING. ANY REQUESTED SUBSTITUTION MUST BE ACCOMPANIED BY A SIDE BY SIDE COMPARISON OF THE BASIS OF DESIGN AND THE PROPOSED SUBSTITUTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW HOW THE PROPOSED SUBSTITUTION IS EQUAL TO THE BASIS OF DESIGN IN ORDER TO BE CONSIDERED.

INSTALL ALL EQUIPMENT AS RECOMMENDED BY EACH MANUFACTURER. PROVIDE EQUIPMENT OF THE TYPE, CAPACITY AND QUALITY AS SCHEDULED OR APPROVED EQUAL WITH THE FOLLOWING FEATURES:

K. CONTROLS SHALL INCLUDE THE FOLLOWING:

K.A. HIGH AND LOW PRESSURE CUTOUTS FOR COMPRESSOR
K.B. OIL PRESSURE CONTROL
K.C. NON-RECYCLING PUMP-DOWN, AND RESET RELAY
K.D. LOW AMBIENT CONTROLS TO PERMIT OPERATION DOWN TO 30 DEG. F. AMBIENT TEMPERATURE
K.E. TIMER CIRCUITS TO PREVENT RAPID LOADING AND UNLOADING OF COMPRESSOR.

L. MAINTAIN OPERATING, INSTALLATION AND MAINTENANCE CLEARANCES AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER, UNLESS OTHERWISE NOTED.

M. REFERENCE CONSTRUCTION DRAWINGS, SCHEDULES AND DETAILS FOR ADDITIONAL INSTALLATION REQUIREMENTS AND/OR OPTIONAL EQUIPMENT SPECIFICATIONS AND MODIFICATIONS.

VARIABLE REFRIGERANT SYSTEM

IN ADDITION TO THE BASIS OF DESIGN LISTED IN THE EQUIPMENT SCHEDULES, THE FOLLOWING MANUFACTURERS ARE CONSIDERED ACCEPTABLE SUBSTITUTES: DAIKIN, LG, MITSUBISHI.

SYSTEM DESCRIPTION AND INSTALLATION

A. THE VARIABLE CAPACITY, HEAT PUMP / HEAT RECOVERY AIR CONDITIONING SYSTEM SHALL BE A SIMULTANEOUS COOLING AND HEATING SPLIT SYSTEM.

B. THE SYSTEM SHALL CONSIST OF OUTDOOR UNITS, BRANCH SELECTORS, MULTIPLE INDOOR UNITS, AND NAVIGATION CONTROLS. EACH INDOOR UNIT OR GROUP OF INDOOR UNITS SHALL BE CAPABLE OF OPERATING IN ANY MODE INDEPENDENTLY OF OTHER INDOOR UNITS OR GROUPS. SYSTEM SHALL BE CAPABLE OF CHANGING MODE (COOLING TO HEATING, HEATING TO COOLING) WITH NO INTERRUPTION TO SYSTEM OPERATION. EACH INDOOR UNIT OR GROUP OF INDOOR UNITS SHALL BE INDEPENDENTLY CONTROLLED.

C. PROVIDE BALL VALVES ON ALL BRANCH SELECTOR PORTS REGARDLESS OF USE.

D. ENSURE THAT MANUFACTURER'S INSTALLATION INSTRUCTIONS ARE ADHERED TO AND REQUIRED CLEARANCES ARE MAINTAINED.

QUALITY ASSURANCE

A. THE UNITS SHALL BE LISTED BY ELECTRICAL LABORATORIES (ETL) AND BEAR THE ETL LABEL.

B. ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.)

C. THE UNITS SHALL BE MANUFACTURED IN A FACILITY REGISTERED TO ISO 9001 AND ISO14001 WHICH IS A SET OF STANDARDS APPLYING TO ENVIRONMENTAL PROTECTION SET BY THE INTERNATIONAL STANDARD ORGANIZATION (ISO)

D. A FULL CHARGE OF R-410A FOR THE CONDENSING UNIT ONLY SHALL BE PROVIDED IN THE CONDENSING UNIT

DELIVERY, STORAGE AND HANDLING

A. UNIT SHALL BE STORED AND HANDLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

WARRANTY

A. THE UNITS SHALL BE COVERED BY THE MANUFACTURER'S LIMITED WARRANTY FOR A PERIOD OF ONE (1) YEAR FROM DATE OF INSTALLATION.

B. IF THE SYSTEMS ARE:

1) INSTALLED BY A CERTIFIED INSTALLER
2) VERIFIED WITH A COMPLETED COMMISSIONING REPORT SUBMITTED TO THE MANUFACTURER

THEN THE UNITS SHALL BE COVERED BY AN EXTENDED MANUFACTURER'S LIMITED WARRANTY FOR A PERIOD OF FIVE (5) YEARS FROM DATE OF INSTALLATION.

C. IN ADDITION THE COMPRESSOR SHALL HAVE A MANUFACTURER'S LIMITED WARRANTY FOR A PERIOD OF SEVEN (7) YEARS FROM DATE OF INSTALLATION.

D. IF, DURING THIS PERIOD, ANY PART SHOULD FAIL TO FUNCTION PROPERLY DUE TO DEFECTS IN WORKMANSHIP OR MATERIAL, IT SHALL BE REPLACED OR REPAIRED AT THE DISCRETION OF THE MANUFACTURER.

DUCTWORK

GENERAL REQUIREMENTS

A. PROVIDE VIBRATION ISOLATION FOR MOTOR-DRIVEN MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN.

B. PROVIDE FLEXIBLE DUCTWORK CONNECTIONS AT INLET AND OUTLET OF EQUIPMENT.

C. DUCT SYSTEMS SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF NFPA 90A AND 90B.

D. DUCT SIZES SHOWN ARE AIRSTREAM DIMENSIONS.

DUCTBOARD – SUPPLY AND RETURN DUCTWORK ONLY

A. SUPPLY AND RETURN DUCTWORK SHALL BE FIBROUS-GLASS DUCTS AND FITTINGS MAXIMUM PERFORMANCE PARAMETERS ARE STATIC-PRESSURE CLASSES FROM MINUS 2- TO PLUS 2-INCH WG (MINUS 500 TO PLUS 500 PA), VELOCITY UP TO 2400 FPM (12.2 M/S), AND LEAKAGE CLASS 6 CFM/100 SQ. FT. AT 1-INCH WG (0.29 L/S PER SQ.M AT 250 PA) WITH ALL JOINTS SEALED. FIBROUS-GLASS DUCTS ARE NOT APPROPRIATE FOR OUTDOOR INSTALLATION.

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING: JOHNS MANVILLE; KNAUF INSULATION, OWENS CORNING.

C. FABRICATION:

C.A. SELECT JOINTS, SEAMS, TRANSITIONS, ELBOWS, AND BRANCH CONNECTIONS AND FABRICATE ACCORDING TO SMACNA'S "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS," CHAPTER 2, "SPECIFICATIONS AND CLOSURE," AND CHAPTER 4, "FITTINGS AND CONNECTIONS."
C.B. FABRICATE 90-DEGREE MITERED ELBOWS TO INCLUDE TURNING VANES.
C.C. REINFORCEMENTS: COMPLY WITH REQUIREMENTS IN [SMACNA'S "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS," CHAPTER 5, "REINFORCEMENT"] FOR CHANNEL- AND TIE-ROD REINFORCEMENT MATERIALS, SPACING, AND FABRICATION.
C.D. PREFORMED ROUND DUCT: COMPLY WITH NAIMA AH116, "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS," SECTION VII, "PREFORMED ROUND DUCT."

SHEETMETAL – SUPPLY, RETURN, OUTSIDE AIR AND EXHAUST

A. DUCTWORK SHALL BE SHEET METAL CONSTRUCTED AND SEALED ACCORDING TO SMACNA STANDARDS FOR 2.5" W.C. POSITIVE AND NEGATIVE PRESSURE. FLEXIBLE DUCT MAY BE USED ONLY AS DETAILED ON THE DRAWINGS. REFER TO DUCTWORK LEGEND AND DUCT DETAILS ON DRAWINGS FOR DUCTWORK, FITTINGS, VANES, DAMPERS, ETC.

FLEXIBLE DUCTWORK

A. FLEXIBLE DUCT SHALL HAVE 1" THICK INSULATION WITH FOIL JACKET AND VAPOR BARRIER LINER. DUCT SHALL MEET CLASS 1, UL-181, AND 25/50 FIRE RATING REQUIREMENTS.

B. USE OF FLEXIBLE DUCT IS LIMITED TO A MAXIMUM OF 5 FEET IN LENGTH AND ONLY IN AREAS DETAILED ON THE MECHANICAL DRAWINGS.

DUCTWORK ACCESSORIES

A. SPLITTERS: PROVIDE ADJUSTABLE, GALVANIZED SPLITTER_DAMPERS PIVOTED AT THE DOWNSTREAM END WITH APPROPRIATE CONTROL DEVICE AT EACH SUPPLY DUCT SPLIT, IN ACCORDANCE WITH SMACNA DUCT MANUAL. PROVIDE A SPLITTER FOR EACH DUCT BRANCH TO TWO OR MORE OUTLETS.

B. EXTRACTORS: PROVIDE TITUS AG225 OR EQUAL EXTRACTORS WITH AN APPROPRIATE CONTROL DEVICE AT EACH RECTANGULAR ZONE OR BRANCH SUPPLY DUCT CONNECTION IN ACCORDANCE WITH SMACNA DUCT MANUAL.

C. VOLUME DAMPERS: PROVIDE OPPOSED_BLADE VOLUME DAMPERS WITH AN APPROPRIATE CONTROL DEVICE IN EACH RETURN AIR, OUTSIDE AIR AND EXHAUST BRANCH DUCT, IN EXHAUST CONNECTIONS TO HOODS OR EQUIPMENT, IN EACH ZONE AT MULTIZONE UNIT DISCHARGE, AND WHERE OTHERWISE INDICATED, IN ACCORDANCE WITH SMACNA DUCT MANUAL. MANUAL BALANCING DAMPER TO BE 16-GAUGE GALVANIZED STEEL REINFORCED BLADES, 20-GAUGE FRAME, MANUAL HAND QUADRANT WITH STANDOFF FOR EXTERNALLY INSULATED DUCTWORK, SYNTHETIC SLEEVE. DAMPERS SUITABLE FOR SERVICE TO 4" W.C. FOR 12" WIDTH, 3" W.C. FOR 24" WIDTH, 2" W.C. FOR 36" WIDTH, 2" W.C. FOR 48" WIDTH AND RATED FOR 2000 FPM.

D. MANUAL LOW-LEAKAGE VOLUME DAMPERS SHALL BE ULTRA LOW-LEAKAGE DAMPER, RATED FOR 6 CFM PER S.F. AT 4" W.C. AND RATED FOR UP TO 4000 FPM AND UP TO 8" W.C. FRAME TO BE 16-GAUGE GALVANIZED, BLADES TO BE 14-GAUGE AIRFOIL. SEALS TO BE SILICONE-RUBBER FOR BLADES AND FLEXIBLE METAL COMPRESSION JAMB SEALS. BEARINGS TO BE SYNTHETIC TYPE. MAXIMUM BLADE HEIGHT IS 6". PROVIDE WITH MANUAL HAND QUADRANT WITH 1½" STANDOFF.

DUCT SUPPORTS

A. HORIZONTAL DUCTS UP TO 40 INCH. SUPPORT HORIZONTAL DUCTS UP TO AND INCLUDING 40 INCHES IN THEIR GREATER DIMENSION BY MEANS OF NO. 22 U.S. GAGE BAND IRON HANGERS ATTACHED TO THE DUCTS BY MEANS OF SCREWS, RIVETS OR CLAMPS, AND FASTENED TO INSERTS WITH TOGGLE BOLTS, BEAM CLAMPS OR OTHER APPROVED MEANS. PLACE SUPPORTS ON AT LEAST 8'-0" CENTERS. USE CLAMPS TO FASTEN HANGERS TO REINFORCING ON SEALED DUCTS.

B. EXPOSED HORIZONTAL SPIRAL SUPPLY DUCTS. SUPPORT BY MEANS OF 1-INCH NO. 8 GUAGE STEEL BAND AROUND DUCT AT 6 FEET ON CENTER. BAND TO BE ATTACHED WITH ALL THREAD ROD AND CONNECTED TO BEAMS ABOVE WITH A BEAM-CLAMP. ALL DEVICES SIMILAR TO PRODUCTS BY SPIRAL MANUFACTURING, INC.

DUCTWORK INSULATION	EXTERNAL WRAP	LINER
SUPPLY, RETURN, EXHAUST, OUTSIDE AIR . . .	X (A)	

C. EXTERNAL DUCT WRAP SHALL BE 2" FOIL FACED EXTERNAL INSULATION (INSTALLED R VALUE = 8.0) SEAL ALL EXTERNAL WRAP INSULATION SEAMS VAPOR TIGHT WITH FOIL TAPE OR MASTIC.

BALANCING

A. QUALIFICATIONS. THE AIR BALANCING SHALL BE DONE BY AN INDEPENDENT AABC OR NEBB CERTIFIED FIRM AT THE COST OF THE GENERAL CONTRACTOR.

B. FLOW BALANCING OF ALL SYSTEMS PROVIDED SHALL BE INCLUDED UNDER THIS CONTRACT. BALANCE AIR FLOW AT ALL AIR DEVICES TO +/- 10% OF VALUE SHOWN ON DRAWINGS. PROVIDE WRITTEN BALANCE REPORT SHOWING INDIVIDUAL GRILLE FLOWS AND SYSTEM FAN PERFORMANCE FOR VOLTAGE, AMPERAGE DRAW AND EXTERNAL STATIC PRESSURE.

C. EXECUTION.
1. PRIOR TO COMMENCING WITH THE BALANCING WORK THE BALANCING SUBCONTRACTOR SHALL INSPECT THE DUCTWORK INSTALLATION TO DETERMINE IF ALL REQUIRED BALANCING DAMPERS AND ACCESS DOORS/PANELS HAVE BEEN INSTALLED. DO NOT USE OUTLET OBD FOR BALANCING.
2. BALANCE ALL FANS TO WITHIN +10%/-5% OF DESIGN. REPLACE FAN DRIVE IF REQUIRED TO OBTAIN THE DESIGN CAPACITY. BALANCE OUTLETS AS FOLLOWS: SMALL AREAS WITH 1 OR 2 OUTLETS:+/-5% OF DESIGN LARGE AREAS WITH 3 OR MORE OUTLETS:+/-10% OF DESIGN. REPORT IN WRITING ALL DEFICIENCIES AND PROBLEMS DISCOVERED TO
(1) ENGINEER
(2) GENERAL CONTRACTOR
(3) THE HVAC SUBCONTRACTOR PRIOR TO COMPLETING THE BALANCING WORK.

D. THIS REPORT SHOULD INCLUDE THE "CAUSE" AND SUGGESTED "SOLUTION", IF KNOWN. THE AIR CONDITIONING UNITS SHALL BE BALANCED IN THE MINIMUM OUTSIDE AIR MODE. THE OUTSIDE AIR DAMPER "%" MINIMUM OPEN POSITION" AND THE "METHOD" USED SHALL BE INCLUDED IN THE BALANCING REPORT.

PIPING

A. CONDENSATE DRAINAGE PIPING SHALL BE TYPE 'M' WITH WROUGHT FITTINGS JOINED WITH SOLDER. PVC MAY BE USED (EXCEPT IN RETURN AIR PLENUMS) WHERE LOCAL CODES PERMIT.

B. REFRIGERANT PIPING:
B.A. INSTALL AND SIZE REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS.
B.B. REFRIGERANT PIPING SHALL BE COPPER TYPE "L" PIPING WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS ABOVE GROUND AND WITHIN BUILDING. USE TYPE "K", ANNEALED TEMPERED COPPER TUBING FOR 2" OR SMALLER WITHOUT JOINTS BELOW GROUND AND WITHIN SLABS.
B.C. INSULATE REFRIGERANT SUCTION LINES BETWEEN EVAPORATOR AND COMPRESSOR WITH 1.5" FLEXIBLE UNICELLULAR, ASTM C 534, TYPE 1.

AIR DEVICES

A. PROVIDE AIR DEVICES AS MANUFACTURED BY: PRICE, TITUS, METALAIRE OR EQUAL.

B. DIFFUSERS, REGISTERS AND GRILLES SHALL BE AS SCHEDULED OR NOTED AND ALL SHALL BE PROVIDED WITH FRAMES COMPATIBLE WITH EACH CEILING TYPE. CONTRACTOR SHALL COORDINATE ALL DIFFUSER LOCATIONS AND FRAME TYPES WITH FINAL APPROVED REFLECTED CEILING PLAN FOR LIGHT FIXTURE AND ALL OTHER CEILING MOUNTED DEVICE LOCATIONS.

NAMEPLATE

A. PROVIDE ENGRAVED NAMEPLATE ATTACHED WITH SCREWS FOR ALL MAJOR EQUIPMENT PROVIDED. USE NOMENCLATURE FROM EQUIPMENT SCHEDULES.

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St. Elmo Service Center 8
Driveway, Parking and Facility Expansion

NO.	REVISION	DATE

STATE OF TEXAS
R. ROSS ALEMAN
98427
LICENSED PROFESSIONAL ENGINEER
3/17/21

SHEET NAME:

MECHANICAL SPECIFICATIONS

DATE: 3/17/2021
REVIEWED BY: PR
PROJECT NO.: 202001400
SHEET NO.:

M04-01

ELECTRICAL LEGEND

NOTE: ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY USED.

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	1X4 LINEAR FLUORESCENT FIXTURE W/ DESIGNATION	ABBREVIATIONS	
	2X2 LINEAR FLUORESCENT FIXTURE W/ DESIGNATION	AFC	ABOVE FINISHED CEILING
	2X4 LINEAR FLUORESCENT FIXTURE W/ DESIGNATION	AFF	ABOVE FINISHED FLOOR
	NIGHT LIGHT FIXTURE	AFG	ABOVE FINISHED GRADE
	LINEAR FLUORESCENT STRIP OR 6" FIXTURE W/ DESIGNATION	AHJ	AUTHORITY HAVING JURISDICTION
	RECESSED DOWNLIGHT FIXTURE W/ DESIGNATION	AL	ALUMINUM
	SURFACE OR PENDANT DOWNLIGHT FIXTURE W/ DESIGNATION	BFG	BELOW FINISHED GRADE
	WALL WASH FIXTURE W/ DESIGNATION, DIRECTION INDICATED BY TRIANGLE	C	CONDUIT
	WALL MOUNT LINEAR FLUORESCENT FIXTURE W/ DESIGNATION	CKT	CIRCUIT
	WALL MOUNT FIXTURE W/ DESIGNATION	CT	CURRENT TRANSFORMER
	SPOTLIGHT	EOMH	ELECTRICALLY OPERATED, MECHANICALLY HELD
	CEILING OR WALL MOUNT EXIT SIGN (INSTALL FACE AS INDICATED BY ARROWS)	EM	EMERGENCY
	EMERGENCY BATTERY FIXTURE	EWC	ELECTRIC WATER COOLER
	CEILING FAN	(E)	EXISTING
	20A SIMPLEX RECEPTACLE AT 18" U.N.O.	ETR	EXISTING TO REMAIN
	20A DUPLEX RECEPTACLE AT 18" U.N.O.	ER	EXISTING RELOCATED
	GFCI RECEPTACLE AT 18" U.N.O. (DUPLEX / SIMPLEX)	F/A	FIRE ALARM
	20A QUADRUPLEX RECEPTACLE AT 18" U.N.O.	F/S	FIRE/SMOKE DAMPER
	20A DUPLEX RECEPTACLE 8" ABOVE COUNTER U.N.O.	G OR GND	GROUND
	20A DUPLEX RECEPTACLE SPECIAL MOUNT (FLOOR, CLG)	GEC	GROUNDING ELECTRODE CONDUCTOR
	20A ISOLATED GROUND RECEPTACLE	GF	GROUND FAULT CIRCUIT INTERRUPTER
	20A WEATHER-RESISTANT GFCI RECEPTACLE WITH WEATHERPROOF "EXTRA DUTY WHILE IN USE" COVER	IG	ISOLATED GROUND
	DEDICATED DUPLEX RECEPTACLE WITH AMP RATING NOTED	N1, N3R, N___	NEMA 1, NEMA 3R, NEMA RATING (AS NOTED)
	SPECIAL RECEPTACLE AS NOTED	NIC	NOT IN CONTRACT
	COMBINATION TELEPHONE/DATA (TELE-DATA) OUTLET (18" ON WALL, 8" ABOVE COUNTER, FLOOR)	NIES	NOT IN ELECTRICAL SECTION
	TELEPHONE OUTLET, DATA OUTLET	NL	NIGHT LIGHT
	TELEVISION/CABLE OUTLET, CARD READER OUTLET	NTS	NOT TO SCALE
	J-BOX (CEILING/WALL, FLOOR)	SDE	SERVICE DISTRIBUTION ENCLOSURE
	SECURITY CAMERA	SPD	SURGE PROTECTIVE DEVICE
	CONDUIT RUN EXPOSED OR CONCEALED	TT	TELEPHONE TERMINAL
	CONDUIT RUN BELOW FLOOR OR GRADE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	ITEM TO BE REMOVED	UG	UNDERGROUND
	SWITCHLEG	UNO	UNLESS NOTED OTHERWISE
	CIRCUIT HOMERUN, #12, THWN/THHN & QTY AS REQ'D, W/ GND, 3/4"C., U.N.O.	WP	WEATHER PROOF
	CIRCUIT HOMERUN CONTAINING 3 HOTS, NEUTRAL, & GROUND	WR	WEATHER RESISTANT
	CONDUIT STUB-UP - CAP & MARK	XFMR	TRANSFORMER
	GROUND	XP	EXPLOSION PROOF
	BUILDING STEEL GROUND	+18"	MOUNTING HEIGHT TO CENTERLINE OF DEVICE AFF OR AFG
	COLD WATER GROUND		
	CONCRETE ENCASED ELECTRODE GROUND	FIRE ALARM SYSTEM	
	PANELBOARD OR LOAD CENTER	FACP	FIRE ALARM CONTROL PANEL
	TRANSFORMER	ANNUN	FIRE ALARM ANNUNCIATOR PANEL
	DISCONNECT SWITCH (NON-FUSED UNLESS NOTED OTHERWISE WITH FUSE SIZE - AF - IN DISCONNECT SWITCH CALLOUT)	F	MANUAL PULL STATION DOUBLE ACTION
	MAGNETIC MOTOR STARTER	AV	GENERAL ALARM COMBINATION HORN/STROBE (AUDIO/VISUAL) (WALL, CLG)
	COMBINATION DISCONNECT AND STARTER	V	FIRE ALARM STROBE (VISUAL DEVICE) (WALL, CLG)
	MOTOR	S, S-H	SPEAKER - CEILING MOUNTED, WALL MOUNTED
	EQUIPMENT CONNECTION		SMOKE/IONIZATION DETECTOR
	OCCUPANCY SENSOR - CEILING MOUNTED	H	HEAT DETECTOR
	PHOTOELECTRIC CELL	D	DUCT DETECTOR
LC	LIGHTING CONTACTOR	PS	SPRINKLER SYSTEM FLOW SWITCH
TC	TIMECLOCK	TS	SPRINKLER SYSTEM TAMPER SWITCH
LCP	LIGHTING CONTROL PANEL	RTS	REMOTE TEST SWITCH
S	LIGHT SWITCH AT 48" UNLESS NOTED		ELECTRIC DOOR HOLDER
SUBSCRIPTS			
3	3-WAY SWITCH		
4	4-WAY SWITCH		
R	RED EMERGENCY BRANCH SWITCH		
O	OCCUPANCY SENSOR SWITCH		
D	DIMMER SWITCH		
K	KEY-OPERATED SWITCH		
T	TIMER SWITCH		
P	SWITCH WITH PILOT LIGHT		
M	MOTOR RATED SWITCH		
V	VACANCY SWITCH (AUTO OFF, MANUAL ON)		
a	LOWER CASE LETTER AT FIXTURES AND SWITCHES (a, b, ETC.) INDICATES SWITCHING CONTROL.		

GENERAL ELECTRICAL NOTES:

1. DEMOLITION: REMOVE ALL DEVICES, FIXTURES AND EQUIPMENT WITHIN THE RENOVATION AREA UNLESS NOTED OTHERWISE TO REMAIN.
2. DEMOLITION: WHERE REQUIRED, EXTEND LIMITS OF DEMOLITION TO ACCOMMODATE FINISHED CONSTRUCTION. TYPICAL THROUGHOUT PROJECT. CONTACT ENGINEER/ARCHITECT FOR CLARIFICATIONS, AS NEEDED.
3. DEMOLITION: DISCONNECT ALL BRANCH CIRCUITS TO DEVICES, FIXTURES, EQUIPMENT, ETC. TO BE REMOVED AND REMOVE CONDUCTORS AND CONDUIT BACK TO LAST J-BOX, FIXTURE OR DEVICE TO REMAIN. ANY CIRCUITS NOT USED SHALL BE REMOVED BACK TO THE PANEL AND BREAKER LABELED SPARE.
4. DEMOLITION: UNLESS OTHERWISE NOTED, ALL MATERIALS TO BE REMOVED SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED BY THE CONTRACTOR.
5. DEMOLITION: REPAIR ALL CEILINGS AND WALLS DAMAGED DURING DEMOLITION PHASE. REPAIR SURFACES TO ORIGINAL CONDITION AND PAINT/FINISH AS DIRECTED BY ARCHITECT. ALL REPAIRS SHALL BE PERFORMED BY PERSONNEL EXPERIENCED IN THIS TYPE OF WORK. ALL REPAIRS MUST BE APPROVED BY THE ARCHITECT.
6. DEMOLITION: RAISE, LOWER, OFFSET, OR OTHERWISE RELOCATE EXISTING CONDUIT/WIRING/BOXES AS REQUIRED TO ACCOMMODATE NEW OR REVISED ABOVE CEILING SYSTEMS. REFERENCE ALSO MECHANICAL AND PLUMBING DRAWINGS AND COORDINATE WITH THOSE TRADES.
7. DEMOLITION: REMOVE ELECTRICAL CIRCUIT TO HVAC EQUIPMENT SHOWN TO BE REMOVED ON MECHANICAL DEMOLITION PLAN. UNLESS NOTED OTHERWISE, REMOVE WIRE AND CONDUIT BACK TO PANEL AND LABEL CIRCUIT BREAKER AS SPARE.
8. EXISTENCE AND LOCATION OF DEVICES, FIXTURES, EQUIPMENT, CIRCUITING, ETC. THAT ARE SHOWN TO BE EXISTING WAS TAKEN FROM EXISTING DRAWINGS AND/OR VISUAL INSPECTION AND SHOULD BE VERIFIED IN FIELD PRIOR TO ANY PRICING OR WORK.
9. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWINGS AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.
10. BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.
11. COORDINATE EACH AND EVERY INTERRUPTION OF SERVICES AND UTILITIES WITH THE OWNER AND UTILITY COMPANIES TO ENSURE MINIMUM SHUT-DOWN TIMES ARE ACCEPTABLE.
12. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
13. IT IS THE INTENT OF THESE DRAWINGS TO CALL FOR FINISHED WORK, I.E., FULLY ADJUSTED, TESTED, AND READY FOR OPERATION. WHERE THE WORD "PROVIDE" IS USED, IT SHALL MEAN, "FURNISH AND INSTALL COMPLETE AND READY FOR USE".
14. FOR EACH EQUIPMENT CONNECTION SHOWN, PROVIDE THE DEVICE, OUTLET, DISCONNECT SWITCH, OR JUNCTION BOX REQUIRED TO CONNECT THE EQUIPMENT.
15. WHERE 120 VOLT BRANCH CIRCUITS EXCEED 100', PROVIDE MINIMUM #10 AWG CONDUCTORS FROM PANEL TO FIRST DEVICE, FIXTURE, ETC.
16. NO SINGLE CONDUIT SHALL CONTAIN MORE THAN 6 CURRENT CARRYING CONDUCTORS, UNLESS NOTED OTHERWISE AND PROPERLY DERATED. HOMERUN CONDUIT SHALL NOT BE LESS THAN 3/4".
17. ALL WIRING SHALL BE IN CONDUIT. ALL CONDUIT SHALL BE 1/2" EMT MINIMUM WITH STEEL TYPE FITTINGS. 1/2" STEEL FLEXIBLE METAL CONDUIT WILL BE ALLOWED IN MAXIMUM LENGTHS OF 6'. 3/8" AND/OR NON-METALLIC FLEXIBLE CONDUIT SHALL NOT BE USED. MC-TYPE CABLE MAY BE USED FOR INTERIOR BRANCH CIRCUIT WIRING IF ALLOWED BY THE AUTHORITY HAVING JURISDICTION. UNDERGROUND CONDUIT SHALL BE RIGID GALVANIZED STEEL (RGS) OR SCHEDULE 40 PVC WITH RGS ELLS AND RGS CONDUIT/FITTINGS WHEN EMERGING FROM GRADE, UNLESS NOTED OTHERWISE. PROVIDE CODE-SIZED GREEN GROUNDING CONDUCTOR IN ALL CONDUIT. INCREASE CONDUIT SIZE AS REQUIRED. ALL WIRING SHALL BE #12 AWG MINIMUM COPPER CONDUCTORS.
18. UNLESS OTHERWISE NOTED, CONDUIT SHALL BE CONCEALED, IF POSSIBLE, AND INSTALLED SQUARE TO BUILDING LINES.
19. ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A #12 PULLWIRE OR EQUAL, AND SHALL BE IDENTIFIED AT ALL JUNCTION, PULL AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION, AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
20. FIXTURES RECESSED IN "T-BAR" CEILING SHALL BE SUPPORTED INDEPENDENTLY OF CEILING SYSTEM, WITH FOUR #12 HANGER WIRES UP TO STRUCTURE. SECURE HANGER WIRES TO CORNERS OF FIXTURE, CLIP FIXTURE TO GRID ON TWO SIDES WITH FACTORY-FURNISHED CLIPS. FINAL CONNECTION TO FIXTURE SHALL BE MADE WITH A FLEXIBLE U.L. APPROVED ASSEMBLY.
21. WHERE FIXTURES CONTAINING BATTERY PACKS ARE SWITCHED (BY TOGGLE SWITCH, OCCUPANCY SENSOR, TIMECLOCK/LIGHTING CONTROL PANEL, ETC.), SUPPLY TO BATTERY PACKS SHALL BE UNSWITCHED. EXIT LIGHTS SHOWN ON A SWITCHED CIRCUIT SHALL BE POWERED BY AN UNSWITCHED LINE ON THAT CIRCUIT.
22. LIGHT SWITCHES SHOWN IN ROOM CONTROL ALL LIGHTS IN THAT ROOM UNLESS NOTED OTHERWISE. WALL SWITCHES SHOWN IN ROOMS WITH CEILING OCCUPANCY SENSOR SWITCHES SHALL OVERRIDE OCCUPANCY SENSOR CONTROL.
23. REVIEW ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, AND OTHER DRAWINGS PRIOR TO BID.
24. INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.
25. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
26. JUNCTION AND PULL BOXES OF APPROPRIATE DIMENSIONS FOR CONDUITS AND CONDUCTORS NOTED SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND IN ADDITION WHERE NECESSARY OR CONVENIENT FOR INSTALLING AND PULLING WIRE.
27. SPLICES IN EXTERIOR PULLBOXES SHALL BE MADE WATERPROOF USING "SCOTCHCAST" SPLICE KIT OR APPROVED EQUAL. SEAL ENDS OF CONDUITS AND DUCTS WITH "DUCTSEAL" OR APPROVED EQUAL.
28. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING, AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC. REQUIRED. BACKFILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
29. PROVIDE ALL UNDERGROUND CONDUIT SIZES 2" AND LARGER WITH LONG SWEEP ELLS. (MINIMUM 36" RADIUS.)
30. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE WITH LIQUIDTIGHT FLEX AND APPROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS, OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
31. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
32. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR AT LEAST 75°C. (CU/AL) OR AS NOTED IN MANUFACTURER'S INSTRUCTIONS, WHICHEVER IS GREATER.
33. ADJUST SMOKE DETECTORS AS REQUIRED TO MAINTAIN MINIMUM 3' CLEARANCE FROM DIFFUSERS. TYPICAL THROUGHOUT.
34. SEE MECHANICAL DRAWINGS FOR ALL DIVISION 23 EQUIPMENT LOCATIONS AND ELECTRICAL LOAD REQUIREMENTS.

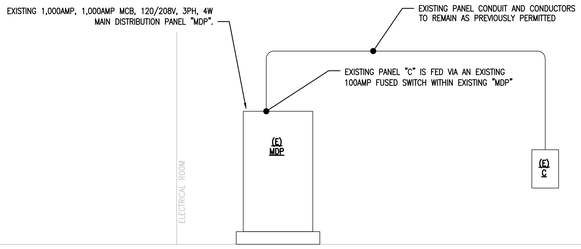
LIGHT FIXTURE SCHEDULE

CALLOUT	LAMP	DESCRIPTION	MODEL	INPUT WATTS	VOLTS	NOTE 1
A	(1) 39W LED	NEW 2X4 LED, LAY-IN	LITHONIA CPX-2X4-4000LM-35K-M2	39	120V 1P 2W	
B	(1) 17.5W LED	6-INCH DOWNLIGHT	LITHONIA LDN6-35-15-L06-AR-LSS-MVOLT-GZ10-XX	17.5	120V 1P 2W	XX = COORDINATE EXACT LENSING, TRIM, FINISH, AND COLOR WITH THE ARCHITECT
EM	(1) 10W LED	EGRESS FIXTURE (NORMALLY OFF), INTERIOR	LITHONIA ELM6LED	10	120V 1P 2W	
S1	(1) 163W LED	LED SITE LIGHTING POLE - 30' MOUNTING HEIGHT	LITHONIA DSX1-LED-P6-40K-T4M-208-SPA-DDBXD POLE = SSS-28-5C-DM19AS-DDBXD (2-FOOT BASE)	163	208V 2P 2W	FULL CUTOFF WITH SPECIAL BACKSIDE CUTOFF
W1E	(1) 25W LED	WALL PACK - W/BATT. BACK-UP	LITHONIA ARC1LED-P3-40K-MVOLT-E4WH-DDBXD	25	120V 1P 2W	
X	(1) 5W LED	NEW EXIT SIGN	MATCH EXISTING MATCH EXISTING	5	120V 1P 2W	MATCH EXISTING STYLE/MANUFACTURER WITH NEW LOW-WATTAGE EXIT SIGN

ELECTRICAL RISER/SERVICE NOTE:

GENERAL: REFER ALSO TO GENERAL ELECTRICAL NOTES ON SHEET E01.01.

1. ALL DEVICES, EQUIPMENT, CONDUIT, CONDUCTORS, METERING EQUIPMENT, ETC, THAT IS REPRESENTED ON THE ELECTRICAL RISER DIAGRAM IS EXISTING AND SCHEDULED TO REMAIN AS PREVIOUSLY PERMITTED. TYPICAL FOR ALL EQUIPMENT AND ASSOCIATED COMPONENTS UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL FULLY SURVEY AND INVESTIGATE THE EXISTING ELECTRICAL DISTRIBUTION AND NOTIFY AYS ENGINEERING OF ANY DEVIATIONS THAT AFFECT THE DESIGN INTENT.
3. IT SHALL NOT BE ACCEPTABLE TO ALTER OR DEVIATE FROM THE ELECTRICAL RISER DESIGN REPRESENTED. ANY ALTERATIONS OR DESIGN DEVIATIONS SHALL BE SUBMITTED TO AND APPROVED BY AYS ENGINEERING, LLC PRIOR TO ANY ROUGH-IN OR EQUIPMENT PURCHASES.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE ELECTRICAL INSTALLATION, EQUIPMENT, DEVICES, CONDUIT, ENCLOSURES, METERS, ETC., ARE IN ACCORDANCE WITH THE LOCAL UTILITY REQUIREMENTS AND THE LOCAL AHJ REQUIREMENTS.



1 ELECTRICAL RISER DIAGRAM

SCALE: NONE

St. Elmo Serv. Center #8 - ADDED LOAD SUMMARY

LOAD DESCRIPTION	KW OR KVA	PHASE	VOLTAGE	AMPS
MAX DEMAND (30-Day read, 6/25/20 - 7/23/20)	7.228	3	208	20.1
125% OF MAX DEMAND (PER NEC 220.87(2))	9.035	3	208	25.1
ADDITIONAL CALCULATED LOAD (FROM PANEL SCHEDULE)	5.45	3	208	15.1
TOTAL LOAD	14.485	3	208	40.2

EXISTING PANEL IS 208V/3 PHASE, AND AMPS = 100
% SPARE CAPACITY IN EXISTING SERVICE: (100 - 40.2) / 100 = 59.8%

THEREFORE, THE EXISTING 100 AMP PANEL IS ADEQUATE FOR THIS ADDITION.

C

ROOM **ADJACENT TO EXISTING "MDP"** | VOLTS **208Y/120V 3P 4W** | AIC **EXISTING**
MOUNTING **SURFACE** | BUS AMPS **100** | MAIN BKR **MLO**
FED FROM **(E) MDP** | NEUTRAL **100%** | LUGS **STANDARD**
NOTE **EXISTING PANEL**

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	-/1	**SPACE**	0			2	-/1	**SPACE**	0		
3	20/1	**LIGHTING**		0.05		4	20/2	**CU-1**		1.46	
5	20/1	**LIGHTING**			0.128	6	|				1.46
7	20/1	**RECEPTACLE**	0.36			8	20/2	**EXTERIOR LIGHTING**	0.489		
9	20/2	**EXISTING**		0		10	|			0.489	
11	|				0	12	15/2	**EXISTING**			0
13	20/1	**EXISTING**	0			14	|		0		
15	20/1	**EXISTING**		0		16	20/2	**EXISTING**		0	
17	20/1	**EXISTING**			0	18	|				0
19	20/1	**EXISTING**	0			20	50/2	**EXISTING**	0		
21	20/2	**EXISTING**		0		22	|			0	
23	|				0	24	50/2	**EXISTING**			0
25	20/1	**EXISTING**	0			26	|		0		
27	30/2	**EXISTING**		0		28	50/2	**EXISTING**		0	
29	|				0	30	|				0
								TOTAL CONNECTED KVA BY PHASE	**0.849**	**2**	**1.58**

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	**1.16**	**1.45**	(125%)	RECEPTACLES	**0.36**	**0.36**	(50%>10)
LARGEST MOTOR	**2.91**	**0.728**	(25%)	HEATING	**2.91**	**2.91**	(100%)
				COOLING	**2.91**	**0**	(0%)
				TOTAL LOAD		**5.45**	
				BALANCED 3-PHASE LOAD		**15.1 A**	

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St. Elmo Service Center 8
Driveway, Parking and Facility Expansion

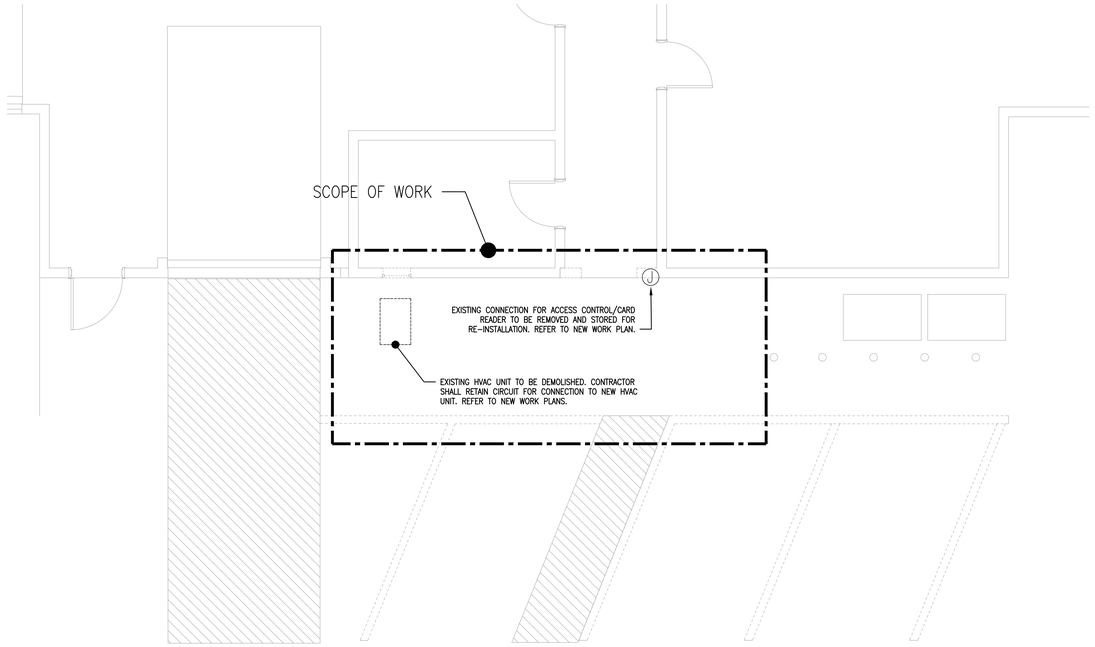
NO. | REVISION | DATE

STATE OF TEXAS
AARON DENNINGTON
111364
LICENSED
PROFESSIONAL ENGINEER

SHEET NAME:

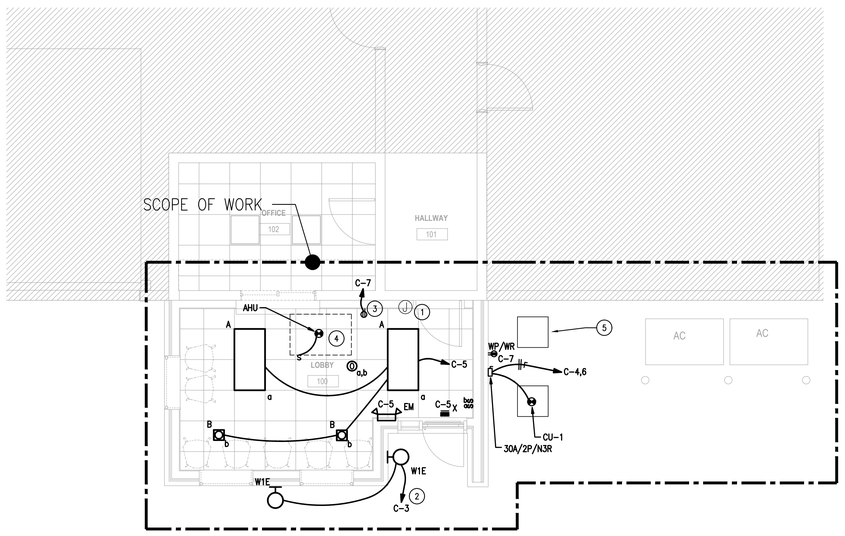
ELECTRICAL LEGEND, NOTES, AND SCHEDULE

DATE: 3/17/2021
REVIEWED BY: AD
PROJECT NO.: 202001400
SHEET NO.: **E01-01**



1 DEMO PLAN - LIGHTING + POWER

SCALE: 1/8" = 1'-0"



2 FLOOR PLAN - LIGHTING + POWER

SCALE: 1/8" = 1'-0"

DEMO NOTES:

GENERAL: REFER ALSO TO GENERAL ELECTRICAL NOTES ON SHEET E01.01.

1. ALL REQUIRED WORK MAY NOT BE CONTAINED WITHIN THE "SCOPE OF WORK" AS SHOWN DUE THE THE PHASING NATURE OF THE PROJECT. THE CONTRACTOR SHALL REMOVE, ADJUST, RELOCATE SUCH EXISTING WORK AS CALLED FOR ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS FOR NEW CONSTRUCTION. THE EXACT SCOPE OF WORK SHALL BE FIELD VERIFIED BY THE CONTRACTOR AS REQUIRED. WHERE REQUIRED, EXTEND LIMITS OF DEMOLITION TO ACCOMMODATE FINISHED CONSTRUCTION. TYPICAL THROUGHOUT PROJECT. CONTACT ENGINEER/ARCHITECT FOR CLARIFICATIONS, AS NEEDED.
2. WHERE EXISTING EQUIPMENT IS TO BE RELOCATED EXTREME CARE SHALL BE TAKEN TO PREVENT DAMAGE DURING THE REMOVAL AND REINSTALLATION. WHERE DAMAGE OCCURS, THE EQUIPMENT SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE ARCHITECT, AND AT NO ADDITIONAL COST TO THE OWNER. ALL ITEMS SHALL BE THOROUGHLY CLEANED, AND IF REQUIRED, PAINTED BEFORE BEING INSTALLED AT THEIR NEW LOCATION.
3. EXCEPT AS OTHERWISE NOTED, ALL EXISTING ELECTRICAL WORK WHICH WILL NOT BE RENDERED OBSOLETE AND WHICH MAY BE DISTURBED DUE TO ANY CHANGES REQUIRED UNDER THIS CONTRACT, SHALL BE RESTORED TO ITS ORIGINAL OPERATING CONDITION. OTHER ELECTRICAL WORK OR MATERIAL RENDERED OBSOLETE SHALL BE ABANDONED WHERE CONCEALED AND REMOVED WHERE EXPOSED. OLD UNUSED WIRING AND DEVICES SHALL BE REMOVED FROM THE ABANDONED (CONCEALED) CONDUITS. OUTLETS AND ASSOCIATED BACK BOX SHALL BE REMOVED AND THE WALL PREPARED FOR PATCHING. ANY CONDUITS STUBBED OUT OF MASONRY SURFACES SHALL BE CUT INTO THE SURFACE AND PATCHED.
4. WHERE EXISTING ELECTRICAL INFRASTRUCTURE INTERFERES WITH NEW WORK INSTALLATIONS AND WHERE SUCH EXISTING ELECTRICAL INFRASTRUCTURE IS TO REMAIN IN USE, THE EXISTING INFRASTRUCTURE SHALL BE RECONNECTED TO EXISTING CIRCUITRY OR PROVIDED A NEW HOMERUN TO ENSURE CONTINUED OPERATION.
5. WHERE EXISTING RACEWAYS THAT ARE NOT TO BE REUSED INTERFERE WITH NEW WORK, THESE RACEWAYS SHALL BE REMOVED BACK TO THE NEAREST JUNCTION BOX OR PULLBOX AND THE OPENING BLANKED, EXISTING RACEWAYS AND/OR WIRING MAY BE REUSED WHERE PRACTICAL, EXCEPT AS OTHERWISE INDICATED.
6. PANELBOARD CABINETS SHALL NOT BE USED FOR OTHER PURPOSES THAN CIRCUIT PROTECTION AND DISTRIBUTION POINTS AND SHALL NOT BE USED AS JUNCTION BOXES OR PULLBOXES.
7. ALL EXISTING EQUIPMENT/DEVICES INDICATED TO REMAIN IN PLACE AND/OR LOCATED OUTSIDE THE SCOPE OF WORK SHALL REMAIN IN NORMAL OPERATION AT ALL TIMES DURING DEMOLITION/CONSTRUCTION. IF ANY EXISTING BRANCH CIRCUIT WIRING FEEDING EXISTING EQUIPMENT/DEVICES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE WITH NEW WIRING OF THE SAME SIZE AND TYPE AS THE EXISTING CONDUCTORS TO ENSURE NORMAL OPERATION OF EXISTING EQUIPMENT/DEVICES.
8. ALL EXISTING ELECTRICAL DEVICES (LIGHTING FIXTURES, RECEPTACLES, ETC.) LOCATED OUTSIDE THE SCOPE OF WORK ARE EXISTING, AND SHALL REMAIN AS PREVIOUSLY PERMITTED. TYPICAL FOR ALL EXISTING ELECTRICAL DEVICES LOCATED OUTSIDE THE SCOPE OF WORK UNLESS NOTED OTHERWISE.
9. ALL EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT (PANELBOARDS, SWITCHGEAR, TRANSFORMERS, SERVICE ENTRANCE EQUIPMENT, ETC.) ARE EXISTING AND SHALL REMAIN AS PREVIOUSLY PERMITTED. TYPICAL FOR ALL EXISTING ELECTRICAL GEAR, U.N.O.

POWER & LIGHTING SHEET NOTES:

GENERAL: REFER ALSO TO GENERAL ELECTRICAL NOTES ON SHEET E01.01.

1. ALL RECEPTACLES, EQUIPMENT, DISCONNECTS, ETC., SHOWN ARE TO BE NEW. TYPICAL FOR ALL RECEPTACLES, EQUIPMENT, DISCONNECTS, ETC., SHOWN, UNLESS NOTED OTHERWISE.
2. ALL REQUIRED WORK MAY NOT BE CONTAINED WITHIN THE "SCOPE OF WORK" AS SHOWN. THE EXACT SCOPE OF WORK SHALL BE FIELD VERIFIED BY THE CONTRACTOR AS NECESSARY. WHERE REQUIRED, EXTEND LIMITS OF CONSTRUCTION TO ACCOMMODATE FINISHED CONSTRUCTION. TYPICAL THROUGHOUT PROJECT. CONTACT ENGINEER/ARCHITECT FOR CLARIFICATIONS, AS NEEDED.
3. FIRE ALARM SYSTEM IS EXISTING. THE EXISTING SYSTEM SHALL BE FULLY SURVEYED AND VERIFIED FOR PROPER WORKING CONDITION. ANY AND ALL ADDITIONS AND ADJUSTMENTS TO THE EXISTING SYSTEM SHALL BE SURVEYED, DESIGNED AND SUBMITTED TO THE AUTHORITY HAVING JURISDICTION BY A LICENSED FIRE ALARM CONTRACTOR AND AS REQUIRED THE THE AHJ. ANY DEVICES SHOWN ARE INDICATED FOR REFERENCE ONLY. FIRE ALARM CONTRACTOR SHALL PROVIDE DESIGN DRAWINGS WHICH ARE NFPA 72 COMPLIANT LAYOUT FOR AHJ APPROVAL. IN ADDITION THE LICENSED FIRE ALARM CONTRACTOR SHALL PROVIDE APPROVED/STAMPED PLANS FOR PERMIT SUBMISSION. FIRE ALARM CONTRACTOR SHALL EXPAND, MODIFY, OR OTHERWISE PROVIDE NEW COMPONENTS, ACCESSORIES, EQUIPMENT, AND DEVICES AS REQUIRED FOR A COMPLETE SYSTEM CAPABLE OF SERVING THE SCOPE OF WORK INDICATED.
4. REFER TO ARCHITECTURAL PLANS FOR RECEPTACLES TO BE MOUNTED AT SPECIFIED HEIGHTS AND LOCATIONS. VERIFY ALL LOCATIONS AND HEIGHTS WITH ARCHITECT.
5. THE EXACT CIRCUITING SHALL BE FIELD VERIFIED AND SURVEYED BY THE CONTRACTOR PRIOR TO ANY WORK BEING PREFORMED.
6. FOR EXISTING BUILDING/RENOVATED AREAS: CIRCUITING DESIGN INTENT IS TO RE-USE EXISTING CIRCUITING WHEREVER POSSIBLE. CONTRACTOR SHALL RE-USE THE EXISTING CIRCUITING WHERE DEEMED FEASIBLE AND POSSIBLE VIA SITE OBSERVATIONS OF THE EXISTING CONDITIONS.
7. ALL EXTERIOR LIGHTING IS EXISTING AND SHALL REMAIN AS PREVIOUSLY PERMITTED. TYPICAL FOR ALL EXTERIOR LIGHTING, U.N.O.
8. PER NEC ARTICLE 110.3(B), ALL EQUIPMENT SHALL BE INSTALLED PER THE RESPECTIVE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS/INSTRUCTIONS.
9. IT SHALL BE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT ALL EQUIPMENT DISCONNECTS ARE PROVIDED WITH THE REQUIRED NEC WORKING CLEARANCES. TYPICAL FOR ALL EQUIPMENT DISCONNECTS.
10. THE CONTRACTOR SHALL PROVIDE A PERMANENTLY AFFIXED LABEL TO EACH INDIVIDUAL RECEPTACLE FACE/COVER PLATE, DISCONNECTING MEANS, SWITCH COVER, ETC., INDICATING THE PANEL AND THE CIRCUIT SERVING THE DEVICE. TYPICAL FOR ALL EQUIPMENT, RECEPTACLES, LIGHTING SWITCHES, AND DISCONNECTS.

LIGHTING CONTROL NOTES:

GENERAL: REFER ALSO TO GENERAL ELECTRICAL NOTES ON SHEET E01.01.

1. LIGHTING ZONES FOR FIXTURES ARE REPRESENTED VIA LOWER CASE LETTERS "a", "b", "c", ETC., DESIGNATIONS ADJACENT TO FIXTURES. ZONES SHALL BE CONTROLLED VIA THE MAIN LIGHTING CONTROL/SWITCHBANK LOCATION(S). COORDINATE THE EXACT ZONING, CONTROL AND SCHEDULING REQUIREMENTS WITH THE ARCHITECT.
2. COORDINATE AND VERIFY THE EXACT SENSOR (OCCUPANCY, VACANCY, DAYLIGHT, ETC.) LOCATION, MOUNTING AND INSTALLATION REQUIREMENTS WITH THE EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN.

KEYED NOTES:

GENERAL: REFER ALSO TO GENERAL ELECTRICAL NOTES ON SHEET E01.01.

1. RELOCATED JUNCTION BOX FOR CONNECTION TO ACCESS CONTROL. PROVIDE JUNCTION BOX AND 3/4" CONDUIT WITH PULL STRING ROUTED TO THE ACCESSIBLE CEILING ABOVE. COORDINATE THE EXACT CONNECTION REQUIREMENTS WITH THE ACCESS CONTROLS SYSTEM/CONSULTANT.
2. CIRCUIT TO BE CONTROLLED ON A SCHEDULED BASIS VIA THE EXISTING TIME CLOCK/LIGHTING CONTROL SYSTEM. COORDINATE EXACT CONNECTION AND OPERATION WITH THE EXISTING SYSTEMS AND THE ARCHITECT.
3. PROVIDE A TAMPER-RESISTANT RECEPTACLE PER 2020 NEC, ARTICLE 406.12.
4. AIR HANDLER UNIT (AHU) TO BE POWERED FROM THE CORRESPONDING OUTDOOR CONDENSING UNIT (CU). COORDINATE EXACT CONNECTION REQUIREMENTS WITH THE EQUIPMENT MANUFACTURER.
5. NEW CONDENSING UNIT TO REPLACE THE DEMOLISHED UNIT. NEW UNIT TO BE AN EXACT "LIKE FOR LIKE" SWAP WITH EQUAL OR LESS ENERGY CONSUMPTION. RELOCATE EXISTING DISCONNECT SWITCH USED TO SERVE DEMOLISHED UNIT AND MOUNT ADJACENT TO NEW UNIT, ALLOWING FOR NEC REQUIRED CLEARANCES. MODIFY/EXTEND EXISTING WIRING PREVIOUSLY SERVING DEMOLISHED UNIT AND CONNECT TO NEW CU, VIA RELOCATED DISCONNECT SWITCH, AS REQUIRED.

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STATE OF TEXAS
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111364
LICENSED
PROFESSIONAL ENGINEER

SHEET NAME:

FLOOR PLANS - LIGHTING & POWER

DATE: 3/17/2021

REVIEWED BY: AD

PROJECT NO.: 202001400

SHEET NO.:

E02-01

ELECTRICAL SPECIFICATIONS:

PART 1 – GENERAL

1.01 SCOPE OF WORK:
FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR, TOOLS, TRANSPORTATION, SUPERINTENDENCE AND SERVICES REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

ALSO INCLUDED WILL BE ALL OTHER WORK AND MISCELLANEOUS ITEMS, NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED FOR A COMPLETE INSTALLATION INCLUDING ALL ACCESSORIES AND APPURTENANCES REQUIRED FOR TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS THAT ALL SYSTEMS BE COMPLETE AND READY FOR OPERATION.

1.02 REGULATORY REQUIREMENTS:
ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST RULES, CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

A. 2015 INTERNATIONAL BUILDING CODE
B. 2015 INTERNATIONAL FIRE CODE
C. 2015 INTERNATIONAL PLUMBING CODE
D. 2015 INTERNATIONAL FUEL GAS CODE
E. 2015 INTERNATIONAL MECHANICAL CODE
F. 2015 INTERNATIONAL ENERGY CONSERVATION CODE/ASHRAE 90.1–2013 ENERGY CODE COMPLIANCE
G. 2020 NATIONAL ELECTRIC CODE
H. LOCAL CODE ORDINANCES AND AMENDMENTS
I. NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION (NEMA)
J. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
K. NATIONAL ELECTRICAL SAFETY CODE (NESC)
L. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
M. UNDERWRITERS' LABORATORIES (UL)
N. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
O. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
P. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
Q. AMERICANS WITH DISABILITIES ACT (ADA)
R. APPLICABLE UTILITY COMPANIES

1.03 LICENSE, FEES AND PERMITS:
ELECTRICAL CONTRACTOR SHALL PAY FOR ALL LICENSES, PERMITS AND INSPECTION FEES REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND SHALL ARRANGE FOR ALL REQUIRED INSPECTIONS.

1.04 SAFETY AND INDEMNITY:
THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

NO ACT, SERVICE, DRAWING REVIEW OR CONSTRUCTION REVIEW BY THE OWNER, THE ENGINEERS OR THEIR CONSULTANTS, IS INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE.

1.05 DRAWINGS AND SPECIFICATIONS:
ALL DRAWINGS AND SPECIFICATIONS SHALL BE CONSIDERED AS A WHOLE AND WORK OF THIS DIVISION SHOWN ANYWHERE THEREIN SHALL BE FURNISHED UNDER THIS DIVISION.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT AND WIRING. MOST DIRECT ROUTING OF CONDUITS AND WIRING IS NOT ASSURED. EXACT REQUIREMENTS SHALL BE GOVERNED BY CONDITIONS OF THE JOB. CONSULT ALL OTHER DRAWINGS IN PREPARATION OF THE BID. EXTRA LENGTHS OF WIRING OR ADDITION OF PULL OR JUNCTION BOXES, ETC. NECESSITATED BY SUCH CONDITIONS SHALL BE INCLUDED.

1.06 CONDITIONS AT SITE:
THE ELECTRICAL CONTRACTOR SHALL HAVE EXAMINED THE SITE AND FAMILIARIZED THEMSELVES WITH ALL DISCERNIBLE EXISTING CONDITIONS. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK REQUIRED BECAUSE OF THESE CONDITIONS, WHETHER SPECIFICALLY MENTIONED OR NOT.

1.07 WORKMANSHIP AND CONTRACTOR'S QUALIFICATIONS:
ONLY QUALITY WORKMANSHIP WILL BE ACCEPTED. HAPHAZARD OR POOR INSTALLATION WILL BE CAUSE FOR REJECTION OF WORK. THE CONTRACTOR SHALL BE LICENSED IN THE STATE IN WHICH THE JOB IS LOCATED.

1.08 SHOP DRAWINGS AND MATERIALS LIST:
SUBMIT TO OWNER IN A SINGLE PACKAGE SIX (6) COPIES OF COMPLETE SHOP DRAWINGS AND MATERIALS LIST, AS NOTED BELOW, FOR REVIEW WITHIN FIFTEEN (15) DAYS AFTER AWARD OF CONTRACT. SUBMITTALS REQUIRED AS FOLLOWS:

A. WIRING DEVICES: SWITCHES, RECEPTACLES, DEVICE PLATES.
B. DISCONNECT SWITCHES.
C. LIGHTING FIXTURES, LAMPS AND LIGHTING CONTROL EQUIPMENT.

1.09 SUBSTITUTIONS:

ONE OR MORE MAKES OF MATERIALS OR METHODS MAY HAVE BEEN SPECIFIED TO ESTABLISH THE STANDARD OF QUALITY, WORKMANSHIP, FINISH AND DESIGN REQUIRED, BUT OTHER MATERIALS OR METHODS EQUAL IN QUALITY, WORKMANSHIP, FINISH, DESIGN, AND GUARANTEED PERFORMANCE WILL BE ACCEPTED. HOWEVER, ALL CHANGES AND SUBSTITUTIONS SHALL BE REQUIRED IN LETTER FORM AND SHALL BE ACCOMPANIED WITH A STATEMENT OF THE AMOUNT OF MONEY TO BE RETURNED TO THE CONTRACT IF THE SUBSTITUTION IS PERMITTED.

NO WORK INVOLVING MATERIALS SUBMITTED FOR SUBSTITUTION SHALL PROCEED UNTIL WRITTEN ACCEPTANCE IS RECEIVED FROM THE OWNER. THE OWNER IS THE SOLE JUDGE OF ACCEPTABILITY OF PREFERRED SUBSTITUTIONS. IF A SUBSTITUTION ITEM IS PERMITTED, AND ANY RE-DESIGN EFFORT IS THEREBY NECESSITATED, THE REQUIRED RE-DESIGN SHALL BE AT THE CONTRACTOR'S EXPENSE.

1.10 COORDINATION:

COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUGH-IN AND CONNECTION FOR EQUIPMENT FURNISHED UNDER OTHER TRADES THAT REQUIRE ELECTRICAL CONNECTIONS. INFORM CONTRACTORS OF OTHER TRADES OF THE REQUIRED ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT TO MAINTAIN SERVICE ABILITY AND CODE COMPLIANCE.

VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK. CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND IN AGREED PRICE, SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE.

1.11 ROUTINGS:

ALL CONDUIT ROUTINGS, INCLUDING MC CABLE, SHALL BE PARALLEL AND PERPENDICULAR TO THE BUILDING STRUCTURE AND LINES. CONDUITS SHALL BE CONCEALED WHERE POSSIBLE UNLESS NOTED OTHERWISE. AESTHETIC APPEARANCE IS VERY IMPORTANT FOR THE WORK OF THIS PROJECT – THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE WORK THAT IS NOT NEAT AND ACCURATE. UNDERGROUND ROUTINGS, IF ANY, BETWEEN BUILDINGS MAY TAKE MOST DIRECT ROUTE.

1.12 CUTTING AND PATCHING:

ALL CUTTING AND PATCHING REQUIRED FOR WORK OF THIS DIVISION IS INCLUDED HEREIN. COORDINATION WITH GENERAL CONTRACTOR AND OTHER TRADES IS IMPERATIVE. CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR AND THE ADDED EXPENSE OF ADJUSTING FOR IMPROPER HOLES, SUPPORTS, ETC.

1.13 ACCEPTANCE DEMONSTRATION:

UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY THE OWNER, THE CONTRACTOR SHALL DEMONSTRATE FOR THE OWNER THE OPERATION OF THE ELECTRICAL INSTALLATION, INCLUDING ANY AND ALL SPECIAL ITEMS INSTALLED BY HIM/HER OR INSTALLED UNDER THEIR SUPERVISION. PROPERLY SET AUTOMATIC TIME SWITCHES TO PERFORM SWITCHING OPERATIONS IN ACCORDANCE WITH SCHEDULES PROVIDED BY THE OWNER'S REPRESENTATIVE AND DEMONSTRATE (USING THE MANUFACTURER'S OPERATING INSTRUCTIONS) HOW TO OVERRIDE AND/OR TEST TIME SWITCHES' PROGRAMMING.

1.14 RECORD DRAWINGS, EQUIPMENT DATA:

MAINTAIN ONE SET OF CLEAN WORKING DRAWINGS AT THE JOB SITE AND ENTER DAILY SUCH "AS-BUILTS" INFORMATION AS FEEDER AND SERVICE ROUTES, PULL BOX LOCATIONS AND CHANGES IN LAYOUT OR ARRANGEMENT WHICH OCCUR DURING CONSTRUCTION. DELIVER COMPLETED DRAWINGS TO THE OWNER.

DELIVER TO THE OWNER'S REPRESENTATIVE THREE COPIES OF DATA SHEETS OR OTHER CURRENT MANUFACTURERS' PUBLICATIONS FOR EACH ITEM OF ELECTRICAL EQUIPMENT FURNISHED FOR THE PROJECT INCLUDING AT LEAST THESE DATA:

A. TECHNICAL DESCRIPTION AND REPLACEABLE PARTS LIST.
B. PHYSICAL DESCRIPTION AND INSTALLATION INSTRUCTIONS.
C. USER'S MANUAL AND OPERATING INSTRUCTIONS.
D. MANUFACTURER'S WARRANTY.

1.15 CLEAN-UP:

RID THE PREMISES OF SCRAP MATERIALS, TRASH AND DEBRIS BOTH DURING CONSTRUCTION AND AT COMPLETION OF THE PROJECT. LEAVE THE BUILDING AND SURROUNDING AREA IN A CLEAN AND ORDERLY CONDITION.

1.16 TEMPORARY SERVICES:

PROVIDE ADEQUATE AND SAFE TEMPORARY ELECTRICAL POWER AND LIGHTING THROUGHOUT THE CONSTRUCTION AND FINISHING OF THE PREMISES FOR BENEFICIAL OCCUPANCY. IN ADDITION TO SPECIAL OR UNUSUAL REQUIREMENTS, PROVIDE AT LEAST THESE ITEMS:

A. SIX 20-AMP CIRCUITS FOR CONSTRUCTION POWER TOOLS. PROVIDE GFI TEMPORARY CIRCUITS WITH COVERPLATES TO MEET OSHA REQUIREMENTS.

B. EIGHT OR MORE LIGHT STRINGS SUSPENDED APPROXIMATELY ONE FOOT BELOW THE HEIGHT OF FINISH CEILING WITH LAMPS SPACED NOT MORE THAN TWELVE FEET ON CENTERS. STRINGS SHALL BE RUN THE LENGTH OF THE BUILDING FOOTPRINT WITH ONE STRING WITHIN EIGHT FEET OF EACH WALL AND ONE (OR MORE) INTERMEDIATE STRING(S) ARRANGED TO LIMIT THE SPACING BETWEEN ROWS TO SIXTEEN FEET OR LESS.

C. FLOOD LIGHTING AND TASK LIGHTING FOR PAINTING AND OTHER FINISH WORK. WHEN PERMANENT ELECTRICAL SERVICE IS OPERABLE, DISCONNECT AND REMOVE FROM THE PREMISES THE MATERIALS AND EQUIPMENT USED FOR TEMPORARY POWER AND LIGHTING, AND RESTORE MODIFICATIONS AND REPAIR DAMAGE CAUSED BY THE INSTALLATION, USE OR REMOVAL OF TEMPORARY SERVICE PROVISIONS.

1.17 WARRANTY:

THE CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP.

PART 2 – PRODUCTS

2.01 MATERIAL APPROVAL:

ALL MATERIALS MUST BE NEW AND BEAR UNDERWRITER'S LABORATORIES LABEL. MATERIALS THAT ARE NOT COVERED BY UL TESTING STANDARDS SHALL BE TESTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY OR A GOVERNMENTAL AGENCY.

MATERIAL NOT IN ACCORDANCE WITH THESE SPECIFICATIONS MAY BE REJECTED EITHER BEFORE OR AFTER INSTALLATION.

2.02 CONDUITS AND OTHER RACEWAYS:

A. RIGID STEEL: HOT-DIPPED GALVANIZED.

B. INTERMEDIATE METAL CONDUIT (IMC): HOT-DIPPED GALVANIZED.

C. ELECTRICAL METALLIC TUBING (EMT): ELECTRO-GALVANIZED.

D. PROVIDE FITTINGS AND ACCESSORIES APPROVED FOR THE PURPOSE EQUAL IN ALL RESPECTS TO THE CONDUIT OR RACEWAY. EMT CONNECTORS AND COUPLINGS SHALL BE STEEL SETSCREW TYPE INDOORS AND STEEL COMPRESSION TYPE IN WET LOCATIONS AND OUTDOORS.

2.03 WIRES AND CABLES:

A. FOR POWER AND LIGHTING SYSTEM 600V OR LESS:

1. CONDUCTOR: MINIMUM SIZE #12 AWG.

a. #12 AND #10 AWG SOLID COPPER.
b. #8 AWG AND LARGER SHALL BE STRANDED COPPER.

2. INSULATION TYPE:

a. #12 TO #1 AWG: THWN FOR WET OR UNDERGROUND AND THHN FOR DRY LOCATIONS.
b. GROUNDING WIRE: TW.

B. ACCEPTABLE PRODUCTS: GENERAL ELECTRIC, ANACONDA, OKONITE, PARANITE OR TRIANGLE PRODUCTS CONFORMING OR EXCEEDING APPLICABLE IPCEA STANDARDS.

2.04 OUTLET BOXES, JUNCTION AND PULL BOXES:

A. OUTLET BOXES: 4" SQUARE X 1-1/2" DEEP (OR LARGER) GALVANIZED SHEET STEEL KO-TYPE WITH PLASTER RING AND COVER FOR GENERAL INTERIOR USE AND CAST METAL TYPE FS OR FD WITH MATCHING SCREW COVERS FOR EXTERIOR AND EXPOSED INTERIOR LOCATIONS (GASKETED IN DAMP OR WET LOCATIONS).

B. JUNCTION BOXES SHALL BE SAME AS OUTLET BOXES UP TO 42 CU. IN. AND CODE-GAUGE STEEL IN LARGER SIZES WITH SURFACE OR FLUSH-TYPE SCREW-MOUNTED TRIM COVERS, BOTH BOXES AND COVERS INHIBITOR-PRIMED AND PAINTED INSIDE OUT.

C. PULL BOXES SHALL BE SAME AS JUNCTION BOXES UNLESS INDICATED OTHERWISE ON THE DRAWINGS, WITH COVERS.

D. ALL BOXES AND ASSOCIATED COMPONENTS SHALL BE STEEL CITY 663 SERIES, WITH P60-3B COVERPLATE OR EQUAL.

2.05 WIRING DEVICES AND PLATES SHALL BE HUBBELL, ARROW HART, LEVITON, GE OR P&S WITH HUBBELL NUMBERS USED TO SPECIFY TYPE USED.

A. STANDARD DESIGN:

1. SWITCH AND RECEPTACLE DEVICES SHALL BE AS SPECIFIED BY ARCHITECT.

2. WALL PLATES SHALL BE AS SPECIFIED BY ARCHITECT.

3. SWITCHES SHALL BE 20 AMP, 120/277 VOLT A.C. RATED: SINGLE POLE SWITCHES SHALL BE #1221, 3-WAY SWITCHES SHALL BE #1223, AND 4-WAY SWITCHES SHALL BE #1224 (HUBBELL NUMBERS).

4. RECEPTACLES SHALL BE GROUNDING TYPE #5362 (HUBBELL NUMBER)

5. CEILING MOUNT OCCUPANCY SENSORS SHALL BE MULTI-TECHNOLOGY, 360-DEGREE, SELF-ADJUSTING, ADJUSTABLE TIME DELAY UP TO 30 MINUTES, COMMERCIAL GRADE, EQUAL TO LEVITON OSC05-MOW.

2.06 CONDUIT HANGERS:

FOR INDIVIDUAL CONDUIT RUNS NOT DIRECTLY FASTENED TO THE STRUCTURE, USE ROD HANGERS MANUFACTURED BY CADDY, UNISTRUT, OR POWERSTRUT. FOR MULTIPLE CONDUIT RUNS, USE UNISTRUT OR POWERSTRUT TRAPEZE TYPE CONDUIT SUPPORT DESIGNED FOR MAXIMUM DEFLECTION NOT GREATER THAN 1/8".

2.07 WIRE CONNECTORS:

FOR WIRE SIZES #8 AWG AND SMALLER: INSULATED PRESSURE TYPE (WITH LIVE SPRING) RATED 105 DEGREES C., 600V. FOR BUILDING WIRING AND 1000V IN SIGNS OR FIXTURES: SCOTCHLOK OR IDEAL. FOR WIRE SIZE #6 AWG AND LARGER: T & B OR EQUIVALENT COMPRESSION TYPE WITH 3M #33+ OR PLYMOUTH "SLIPKNOT GRAY" TAPE INSULATION.

2.08 MISCELLANEOUS MATERIALS:

A. SAFETY SWITCHES: HEAVY DUTY TYPE, 600V, HORSEPOWER RATED FOR MOTORS, FUSED OR NON-FUSED AS REQUIRED. MOUNT IN ENCLOSURE WITH NEMA RATING AS REQUIRED FOR THE SPECIFIC APPLICATION. GENERAL ELECTRIC, SQUARE D, EATON OR SIEMENS-ITS.

B. TIME CLOCK: TORK #DGLC, OR ACCEPTED SUBSTITUTE.

C. PHOTOCELLS: TORK EPC1, OR ACCEPTED SUBSTITUTE.

D. CONTACTORS/RELAYS: AS MANUFACTURED BY ASCO, OR ACCEPTED SUBSTITUTE, MECHANICALLY HELD WITH RELAYS AS REQUIRED TO OPERATE ON TWO WIRE CONTROL CIRCUITS.

2.09 LIGHTING:

A. LIGHTING TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THE DRAWINGS. SUBCONTRACTORS TO INSTALL ALL FIXTURES COMPLETE, INCLUDING LAMPS AND BALLASTS, READY FOR SERVICE.

B. FIXTURE DESIGNATION: FIXTURE TYPES ARE DESIGNATED ON DRAWINGS. FOR EXACT FIXTURE COUNT AND LOCATION, REFER TO REFLECTED CEILING PLAN.

PART 3 – EXECUTION

3.01 GENERAL:

A. ELECTRIC SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. GOVERN EXACT ROUTING OF CABLE AND WIRING AND THE LOCATIONS OF OUTLETS BY THE STRUCTURE AND EQUIPMENT SERVED. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.

B. CONSULT ALL OTHER DRAWINGS, VERIFY SCALES AND REPORT ANY DIMENSIONAL DISCREPANCIES OR OTHER CONFLICTS WITH THE ARCHITECT BEFORE SUBMITTING BID.

C. ALL HOME RUNS TO PANELBOARDS ARE INDICATED AS STARTING FROM THE OUTLET NEAREST THE PANEL AND CONTINUING IN THE GENERAL DIRECTION OF THAT PANEL. CONTINUE SUCH CIRCUITS TO THE PANEL AS THOUGH THE ROUTES WERE COMPLETELY INDICATED. TERMINATE HOMERUNS OF SIGNAL, ALARM, AND COMMUNICATION SYSTEMS IN A SIMILAR MANNER.

D. AVOID CUTTING AND BORING HOLES THROUGH STRUCTURE OR STRUCTURAL MEMBERS WHEREVER POSSIBLE. OBTAIN PRIOR APPROVAL OF OWNER AND CONFORM TO ALL STRUCTURAL REQUIREMENTS WHEN CUTTING OR BORING THE STRUCTURE IS NECESSARY AND PERMITTED.

E. FURNISH AND INSTALL ALL NECESSARY HARDWARE, HANGERS, BLOCKING, BRACKETS, BRACING, RUNNERS, ETC. REQUIRED FOR EQUIPMENT SPECIFIED UNDER THIS SECTION.

F. PROVIDE NECESSARY BACKING REQUIRED TO INSURE RIGID MOUNTING OF OUTLET BOXES.

3.02 WIRING METHODS:

A. NO "ROMEX" OR ARMORED CABLE WIRING IS PERMITTED – ALL ELECTRICAL WIRING MUST BE IN CONDUIT.

B. CONDUIT SHALL BE RIGID STEEL, IMC, EMT, METAL CLAD (MC) CABLE, OR SCHEDULE 40 PVC AS FOLLOWS:

1. ABOVE GROUND: USE RIGID STEEL, IMC, MC, OR EMT. MC CABLE SHALL BE INSTALLED ONLY WHERE PERMITTED BY CODE AND THE AUTHORITY HAVING JURISDICTION.

a. WET LOCATIONS: RIGID STEEL OR IMC ONLY.
b. LOCATIONS SUBJECT TO MECHANICAL DEFORMATION: RIGID STEEL OR IMC ONLY.
c. DRY INTERIOR LOCATIONS FOR BRANCH CIRCUIT WIRING AND NOT SUBJECT TO MECHANICAL DEFORMATION: EMT, IMC, MC, OR RIGID STEEL CONDUIT.
d. DRY INTERIOR LOCATIONS FOR OTHER THAN BRANCH CIRCUIT WIRING AND NOT SUBJECT TO MECHANICAL DEFORMATION: EMT, IMC, OR RIGID STEEL CONDUIT.

2. UNDERGROUND: USE RIGID STEEL OR SCHEDULE 40 PVC WITH RIGID STEEL ELLS AND RIGID STEEL CONDUIT/FITTINGS WHEN EMERGING FROM GRADE, UNLESS NOTED OTHERWISE.

C. USE FLEXIBLE CONDUITS IN THE FOLLOWING APPLICATIONS (MAX 6-FT):

1. RECESSED LIGHTING FIXTURES.

2. MOTOR CONNECTIONS.

3. AT BUILDING JOINTS.

4. AT WET LOCATIONS, FLEXIBLE CONDUIT SHALL BE LIQUIDTIGHT TYPE.

D. LIGHT FIXTURES INSTALLED IN LAY-IN CEILINGS MAY BE WIRED FROM FIXTURE TO FIXTURE USING MC CABLE UNLESS PROHIBITED BY THE AHJ. VERIFY THAT LIGHT FIXTURES ARE PROVIDED WITH JUNCTION BOXES APPROVED FOR THIS PURPOSE. MC TYPE CABLE TO MEET ANSI/NFPA 70 REQUIREMENTS. CABLE ARMOR TO BE INTERLOCKED STEEL METAL TAPE. MC TYPE CABLE MANUFACTURED BY AFC CABLE SYSTEMS, PIRELLI CABLE CORPORATION AND SOUTHWIRE COMPANY ARE APPROVED. MC CABLE SHALL NOT BE USED TO WIRE LIGHT FIXTURES INSTALLED IN EXPOSED CEILINGS FROM FIXTURE TO FIXTURE (6-FT LIGHT FIXTURE WHIPS ARE PERMITTED).

E. ALL WIRING SHALL BE IN CONDUIT.

F. ALL CONDUIT AND MC CABLE SHALL BE SUPPORTED AS REQUIRED BY THE NEC.

3.03 INSTALLATION OF CONDUITS:

A. GENERAL:

1. RUN ALL CONDUIT CONCEALED, IF POSSIBLE, UNLESS NOTED OTHERWISE ON THE PLANS.

2. RUN ALL CONDUIT PARALLEL TO OR AT RIGHT ANGLES TO CENTER LINES OF COLUMNS AND BEAMS.

3. CONDUITS ABOVE CEILINGS SHALL NOT OBSTRUCT REMOVAL OF CEILING TILES, LIGHTING FIXTURES, AIR DIFFUSERS, ETC.

4. CONDUITS SHALL NOT CROSS ANY DUCT SHAFT OR AREA DESIGNATED AS FUTURE DUCT SHAFT HORIZONTALLY. CONDUIT RISERS, WHEN ALLOWED IN DUCT SHAFT, MUST BE COORDINATED WITH MECHANICAL WORK TO AVOID ANY CONFLICT.

5. INSTALL NO MORE THAN THE EQUIVALENT OF THREE 90-DEGREE BENDS IN ANY CONDUIT RUN. PROVIDE J-BOXES AS NEEDED WHERE MORE BENDS ARE NEEDED.

B. CONDUIT SUPPORTS:

1. SUPPORT CONDUITS WITH UNDERWRITER'S LABORATORIES LISTED STEEL CONDUIT SUPPORTS AT INTERVALS REQUIRED BY THE NATIONAL ELECTRIC CODE. WIRES OR SHEET METAL STRIPS ARE NOT ACCEPTABLE FOR CONDUIT SUPPORT. USE CONDUIT HANGERS FOR ALL CONDUITS NOT DIRECTLY FASTENED TO STRUCTURE AND FOR ALL MULTIPLE CONDUIT RUNS. DO NOT ATTACH ANY CONDUIT TO MECHANICAL DUCTS OR PIPES.

2. AVOID ATTACHING CONDUIT TO AIR MOVING SYSTEM. WHEN IT IS NECESSARY TO SUPPORT CONDUIT FROM AIR MOVING SYSTEM, PROVIDE A LENGTH OF FLEXIBLE CONDUIT BETWEEN PORTION ATTACHED TO AIR MOVING SYSTEM AND PORTION ATTACHED TO THE BUILDING TO MINIMIZE TRANSMISSION OF VIBRATION TO THE BUILDING STRUCTURE.

3. AN NFPA 251 TESTED AND APPROVED CEILING SYSTEM CAN BE USED TO SUPPORT BRANCH CIRCUIT CABLING WHERE APPROVED BY THE AHJ.

C. CONDUIT PENETRATION:

1. PENETRATING FIRE RATED FLOOR OR WALL: INSTALL CONDUIT IN CONDUIT SLEEVE OR FRAMED OPENING. SEAL PENETRATION WITH FIRE RETARDANT SEALANT.

2. PENETRATING ROOF OR EXTERIOR WALL: AVOID PENETRATING ROOF OR EXTERIOR WALL WHERE POSSIBLE. WHERE PENETRATIONS ARE NECESSARY, BUILDING WEATHERPROOF INTEGRITY MUST BE PRESERVED. CONDUITS PENETRATING THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTERFLASHING SLEEVE.

3. PENETRATING NON-FIRE RATED DRY WALL: CONDUIT SLEEVES ARE NOT REQUIRED. PENETRATIONS MUST BE SEALED WITH PLASTER PRIOR TO PAINTING. PENETRATIONS MADE AFTER WALL FINISH IS APPLIED MUST BE AS SMALL AS POSSIBLE AND PROVIDED WITH ESCUTCHEONS, ONE ON EACH SIDE OF WALL.

4. PENETRATING SUSPENDED CEILING: CUT HOLE AS SMALL AS POSSIBLE TO PERMIT CONDUIT PENETRATION. PROVIDE ESCUTCHEON FOR EACH CONDUIT BELOW CEILING.

3.04 CONNECTIONS TO EQUIPMENT:

A. GENERAL:

1. FURNISH AND INSTALL REQUIRED POWER SUPPLY CONDUIT AND WIRING TO ALL EQUIPMENT. SEE BELOW FOR OTHER WIRING REQUIRED.

2. FURNISH AND INSTALL A DISCONNECT SWITCH IMMEDIATELY AHEAD OF AND ADJACENT TO EACH MAGNETIC MOTOR STARTER OR APPLIANCE UNLESS THE MOTOR APPLIANCE IS LOCATED ADJACENT AND WITHIN SIGHT OF THE SERVING PANELBOARD, CIRCUIT BREAKER OR SWITCH. VERIFY ALL EQUIPMENT NAMEPLATE CURRENT RATINGS PRIOR TO INSTALLATION.

3. INSTALL ALL ROUGH-IN WORK FOR EQUIPMENT FROM APPROVED SHOP DRAWINGS TO SUIT THE SPECIFIC REQUIREMENTS OF THE EQUIPMENT.

4. FURNISH AND INSTALL MANUAL THERMAL PROTECTION FOR ALL MOTORS NOT INTEGRALLY EQUIPPED WITH THERMAL PROTECTION.

3.05 INSTALLATION OF CONDUCTORS:

A. PULL NO WIRE INTO ANY PORTION OF THE CONDUIT SYSTEM UNTIL ALL CONSTRUCTION WORK WHICH MIGHT DAMAGE THE WIRE HAS BEEN COMPLETED.

B. INSTALL ALL WIRE CONTINUOUS FROM OUTLET TO OUTLET OR TERMINAL TO TERMINAL. SPLICES IN CABLES WHEN REQUIRED SHALL BE MADE IN HAND HOLES, PULL BOXES OR JUNCTION BOXES. MAKE BRANCH CIRCUIT SPLICES IN OUTLET BOXES WITH 8" OF CORRECTLY COLOR-CODED TAILS LEFT IN THE BOX.

C. SPLICES IN WIRES AND CABLES SHALL BE MADE UTILIZING MATERIALS AND METHODS DESCRIBED HEREIN BEFORE.

D. MAKE ALL GROUND, NEUTRAL AND LINE CONNECTIONS TO RECEPTACLE AND WIRING DEVICE TERMINALS AS RECOMMENDED BY MANUFACTURER.

E. PROVIDE BRADY WIRE MARKERS WHERE NUMBER OF CONDUCTORS IN A BOX EXCEEDS FOUR.

3.06 WIRE COLOR CODE:

COLOR CODING SHALL BE CONTINUOUS FOR WIRE #12 THROUGH #10 AWG. PHASE CONDUCTORS #8 AND LARGER AND CONDUCTORS OF ANY SIZE IN CABLE ASSEMBLIES MAY HAVE COLORED PHASING TAPE AT TERMINATIONS. COLOR CODE WIRES TO MATCH EXISTING BUILDING STANDARD.

3.07 IDENTIFICATION:

A. PANELBOARD SCHEDULE: AFTER COMPLETION OF WORK, PROVIDE TYPEWRITTEN UPDATED PANELBOARD SCHEDULES FOR ALL PANELBOARDS. INCLUDE ROOM/EQUIPMENT DESIGNATIONS TO IDENTIFY ROOM/EQUIPMENT SERVED BY CIRCUIT.

3.08 GROUNDING:

A. ELECTRICAL SERVICE AND SEPARATELY DERIVED ALTERNATING CURRENT SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250-3 TO 250-26, INCLUSIVE.

B. GROUND NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL ENCLOSURES, FRAMES, CABLE TRAYS OR CONDUCTOR RACEWAYS TO PROVIDE A LOW IMPEDANCE PATH FOR LINE-TO-GROUND FAULT CURRENT AND TO BOND ALL NON-CURRENT CARRYING METAL PARTS TOGETHER. PROVIDE GROUND CONDUCTOR IN EACH RACEWAY SYSTEM, WHETHER GROUND WIRE IS SPECIFICALLY LISTED OR NOT. EQUIPMENT GROUND CONDUCTOR SHALL BE ELECTRICALLY AND MECHANICALLY CONTINUOUS FROM THE ELECTRICAL CIRCUIT SOURCE TO THE EQUIPMENT TO BE GROUNDED. SIZE GROUND CONDUCTORS PER NEC ARTICLE 250.122 UNLESS LARGER CONDUCTORS ARE SHOWN ON DRAWINGS.

C. GROUNDING CONDUCTORS SHALL BE IDENTIFIED WITH GREEN INSULATION. WHERE GREEN INSULATION IS NOT AVAILABLE ON LARGER SIZES, BLACK INSULATION SHALL BE USED AND SUITABLY IDENTIFIED WITH GREEN TAPE AT EACH JUNCTION BOX OR DEVICE ENCLOSURE.

FIRE ALARM SYSTEM SPECIFICATIONS:

1. WHERE REQUIRED BY CODE, FIRE ALARM SYSTEM SHALL BE FURNISHED, INSTALLED AND WIRED BY THE FIRE ALARM CONTRACTOR. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED BY A NICET LEVEL III MINIMUM CERTIFIED FIRE ALARM TECHNICIAN, TRAINED AND CERTIFIED BY MANUFACTURER IN FIRE ALARM SYSTEM DESIGN. FIRE ALARM CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM EQUAL TO NOTIFIER SYSTEM 500 OR EQUAL OF PYROTRONICS, EDWARDS SYSTEMS TECHNOLOGIES OR SIMPLEX. CONTROL PANEL TO BE MICROPROCESSOR BASED SYSTEM CONTAINING FIRE ALARM ZONES IN QTY NEEDED FOR COMPLETE SYSTEM, INITIATING ALARM POWER MODULES FOR HORNS & STROBES, CONTROL RELAY MODULE FOR CONTROL OF H.V.A.C. EQUIPMENT, AND ALL OTHER MISCELLANEOUS ITEMS FOR A COMPLETE AND OPERATING FIRE ALARM SYSTEM. CONTROL PANEL TO BE PROGRAMMED SO THAT IF ANY ONE ZONE IS IN ALARM, ALL H.V.A.C. UNITS ARE TO BE SHUT DOWN AND SMOKE PURGE SEQUENCE SHALL BE ACTIVATED.

ZONE #1 = MANUAL PULL STATIONS
ZONE #2 = DUCT DETECTORS FOR H.V.A.C. UNITS

2. THE FOLLOWING PERIPHERAL DEVICES TO BE INSTALLED AS A PART OF THE FIRE ALARM SYSTEM:

2.1. MANUAL PULL STATION, NON-CODED, DUAL-ACTION, UNIT, +3'-10" A.F.F. #NBG-10.

2.2. AREA SMOKE DETECTORS, PHOTO-ELECTRIC TYPE #2451-B402B.

2.3. DUCT MOUNTED SMOKE DETECTORS, PHOTO-ELECTRIC TYPE #2451-DH400ACDC WITH REQUIRED SAMPLING TUBES (PROVIDED BY MECHANICAL CONTRACTOR, CONNECTED BY ELECTRICAL CONTRACTOR). COORDINATE WITH MECHANICAL CONTRACTOR FOR LOCATIONS.

2.4. HORN/STROBE UNIT, MINIMUM 75cd, 80" TO BOTTOM OF UNIT, OR SOME OTHER CONSISTENT HEIGHT AT LEAST 6 INCHES BELOW THE CEILING, #SS2475ADA.

2.5. STROBE ONLY UNIT, MINIMUM 75cd, 80" TO BOTTOM OF UNIT, OR SOME OTHER CONSISTENT HEIGHT AT LEAST 6 INCHES BELOW THE CEILING, #IS1-24-VFR.

3. CONTRACTOR TO PROVIDE 1/2" EMPTY CONDUIT FROM FIRE ALARM CONTROL CABINET TO OWNER'S TELEPHONE TERMINAL BOARD. OWNER TO PROVIDE WIRING AND CONNECTION TO "LOCAL ENERGY MUNICIPAL BOX OUTPUT". ALL FIRE ALARM CONDUCTORS TO BE AS RECOMMENDED BY MANUFACTURER AND MUST BE INSTALLED IN CONDUIT.

4. ALL FIRE ALARM MATERIALS AND INSTALLATION TO BE IN CONFORMANCE WITH N.F.P.A. 72 AND A.D.A. (AMERICANS WITH DISABILITIES ACT). IN AREAS AND CORRIDORS WHERE TWO OR MORE VISUAL STROBE UNITS ARE INSTALLED, PROVIDE SYNCHRONIZED STROBE UNITS SO AS TO PROVIDE A FLASH RATE MINIMUM OF 1 Hz AND A MAXIMUM OF 3 Hz.

5. ADDRESSABLE NOTIFICATION APPLIANCES ARE ACCEPTABLE.

6. ALL PERIPHERAL DEVICE ADDS SHALL BE PRICED TO THE OWNER MATCHING CURRENT GSA PRICING.

7. ELECTRICAL AND FIRE ALARM CONTRACTOR SHALL PROVIDE SUBMITTAL DOCUMENTS TO AUSTIN FIRE DEPARTMENT (AFD) FOR EQUIPMENT AND DEVICES BEING INSTALLED FOR APPROVAL.

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St. Elmo Service Center 8
Driveway, Parking and Facility
Expansion

NO.	REVISION	DATE

STATE OF TEXAS
AARON DENNINGTON
111364
LICENSED
PROFESSIONAL ENGINEER

SHEET NAME:

ELECTRICAL SPECIFICATIONS

DATE: 3/17/2021

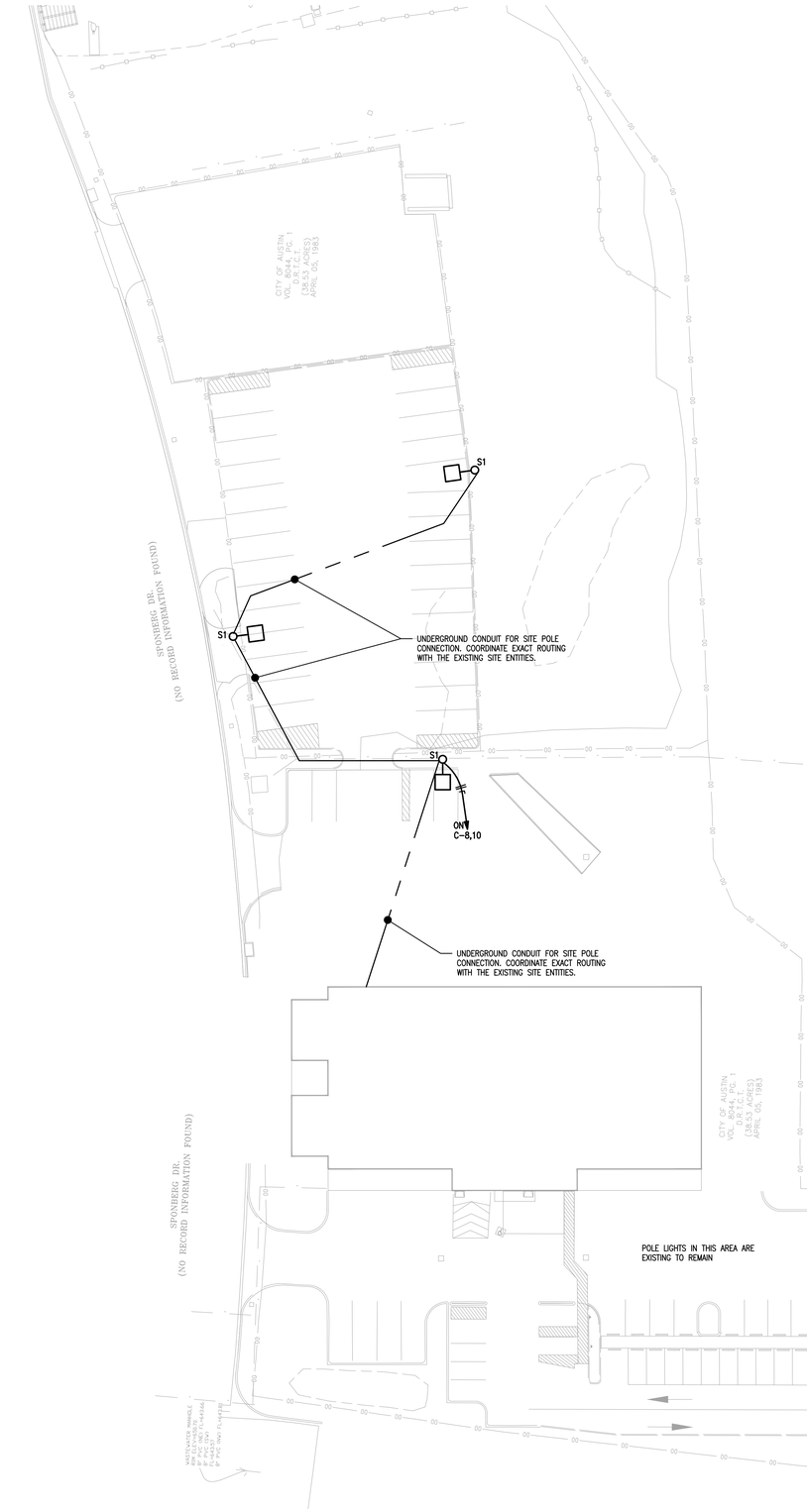
REVIEWED BY: AD

PROJECT NO.: 202001400

SHEET NO.:

E03-01

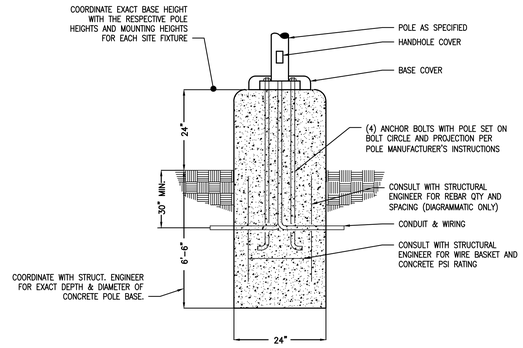
GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion



1 SITE PLAN - ELECTRICAL

SCALE: 1" = 30'-0"

TRUE NORTH / PLAN NORTH



2 LIGHT POLE FOOTING

SCALE: NONE

SHEET NOTES:

GENERAL: REFER ALSO TO GENERAL ELECTRICAL NOTES ON SHEET E01.01.

1. COORDINATE EXACT ELECTRICAL CONNECTION (TRENCHING/ROUTING, CONDUIT, ETC.) REQUIREMENTS WITH LOCAL ELECTRIC UTILITY PRIOR TO ANY SITE WORK.
2. ALL SITE LIGHTING SHALL BE CONTROLLED ON A SCHEDULED BASIS VIA THE LIGHTING CONTROL SYSTEM/TIME CLOCK IN ACCORDANCE WITH THE 2015 IECC, SECTION C405.2.5. COORDINATE EXACT OPERATION TIMES WITH THE OWNER.
3. VERIFY THE EXACT FIXTURE LOCATIONS, QUANTITIES AND MOUNTING REQUIREMENTS WITH THE OWNER PRIOR TO ROUGH-IN.
4. REFER TO LIGHT POLE BASE DIAGRAM #2/THIS SHEET FOR ALL SITE POLE LIGHTING FIXTURES.
5. FOR CIRCUITS EXCEEDING 100-FT FROM THE SERVING PANEL, INCREASE WIRE SIZES AS NECESSARY TO ACCOUNT FOR VOLTAGE DROP.

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PROFESSIONAL ENGINEER

SHEET NAME:

SITE PLAN - ELECTRICAL

DATE: 3/17/2021

REVIEWED BY: AD

PROJECT NO.: 202001400

SHEET NO.:

EU01-01

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking Plan North	+	1.2 fc	2.9 fc	0.2 fc	14.5:1	6.0:1

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking Plan North	+	1.2 fc	2.9 fc	0.2 fc	14.5:1	6.0:1

D-Series Size 1
LED Area Luminaire

Catalog Number
Notes
Type

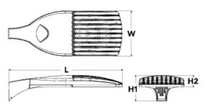
Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Specifications

EPA: 1.01 ft² (0.09 m²)
Length: 33" (83.8 cm)
Width: 13" (33.0 cm)
Height H1: 7-1/2" (19.0 cm)
Height H2: 3-1/2"
Weight (max.): 27 lbs (12.2 kg)



S1: DSX1 LED P6 40K T4M VOLTAGE SPA FINISH

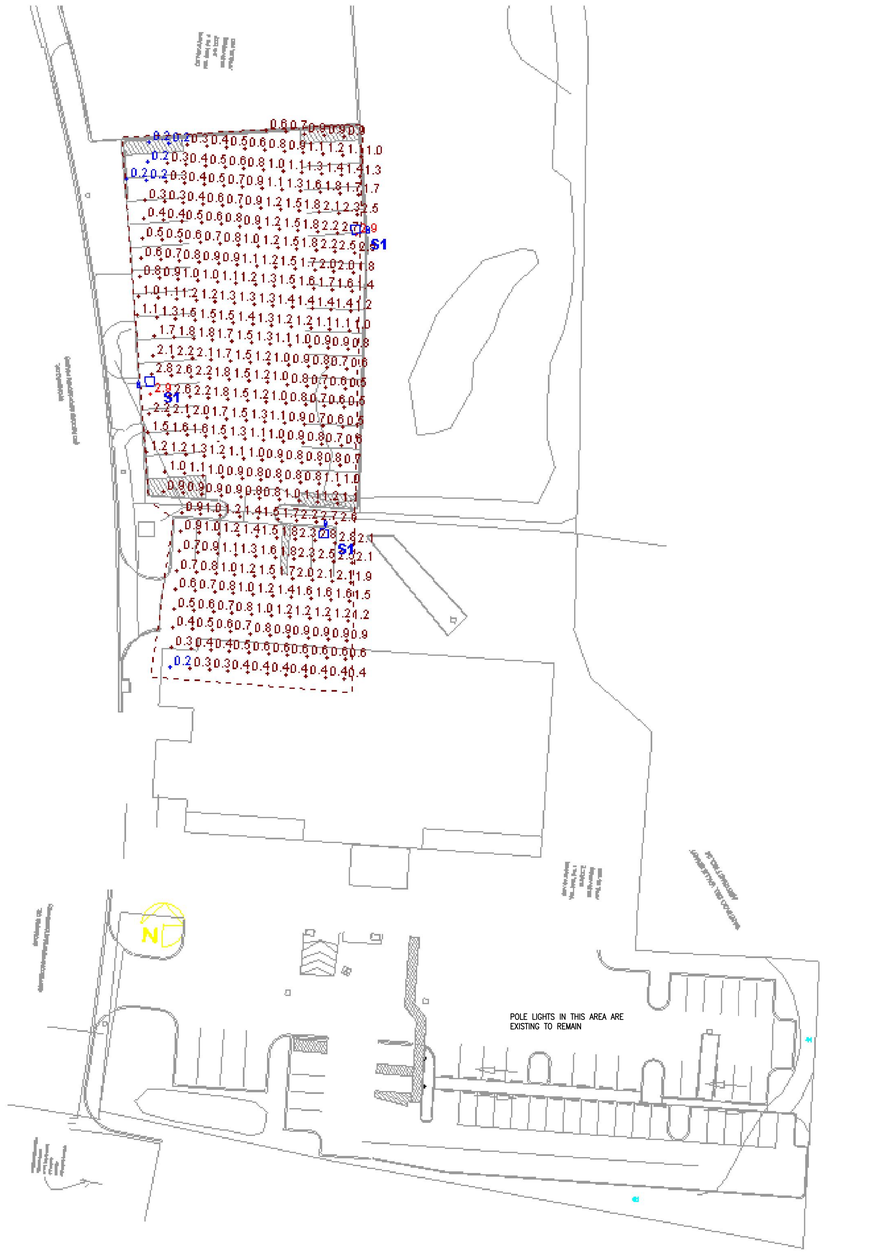
A= Capable options indicated by Bi-color background.

Ordering Information **EXAMPLE:** DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 P7 P2 P5 P8 P3 P6 P9 **Rotated optics** P10 P12 P11 P13	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium BLC Backlight control [1] LCCO Left corner cutoff [1] RCCO Right corner cutoff [1]	MVOLT [2] 120 [3] 208 [3] 240 [3] 277 [3] 347 [3] 480 [3]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor [4] RPUMBA Round pole universal mounting adaptor [4] **Shipped separately** KMA8DDBXD U Mast arm mounting bracket adaptor (specify finish) [5]

Control options		Other options		Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled [6] PIRHN Network, high/low motion/ambient sensor [7] PIR Wide, high/low motion/ambient sensor [8] PIR5 Five-pin receptacle only (controls ordered separate) [9,11] PIR7 Seven-pin receptacle only (controls ordered separate) [9,11] DMG 0-10v dimming wires pulled outside of fixture (for use with an external control, ordered separately) [12] DS Dual switching [13,14]	PIR High/low, motion/ambient sensor, 8–15' mounting height, ambient sensor enabled at 5fc [6,14] PIRH High/low, motion/ambient sensor, 15–30' mounting height, ambient sensor enabled at 5fc [6,14] PIR1FC3V High/low, motion/ambient sensor, 8–15' mounting height, ambient sensor enabled at 1fc [6,14] PIRHTFC3V Bi-level, motion/ambient sensor, 15–30' mounting height, ambient sensor enabled at 1fc [6,14] FAO Field adjustable output [9]	**Shipped installed** HS House-side shield [4] SF Single fuse (120, 277, 347V) [3] DF Double fuse (208, 240, 480V) [3] L90 Left rotated optics [1] R90 Right rotated optics [1] **Shipped separately** BS Bird spikes [4] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBKD Textured black DNATXD Textured natural aluminum DWHGXD Textured white



Current View

TRUE NORTH PLAN NORTH

1 PHOTOMETRIC SITE PLAN
SCALE: 1" = 30'-0"

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St. Elmo Service Center 8
Driveway, Parking and Facility
Expansion

NO.	REVISION	DATE

STATE OF TEXAS
AARON DENNINGTON
111364
LICENSED
PROFESSIONAL ENGINEER

SHEET NAME:
SITE PLAN - PHOTOMETRICS

DATE: 3/17/2021
REVIEWED BY: AD
PROJECT NO.: 202001400
SHEET NO.:
EU01-02

GSC - 202001400 St. Elmo Service Center 8 Driveway, Parking and Facility Expansion